SCOTTISH HOSPITALS INQUIRY

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

Witness Statements – Week Commencing 2 September 2024 – Volume 3

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Scottish Hospitals Inquiry
Witness Statement of
Annette Rankin

The following question responses are from events/dates ranging up to 15 years ago and therefore whilst some are based on memory, a review of available emails, mainly from 2015 onwards (very limited emails available from 2009-2014), filed Health care infections incident assessment tools) (HIIATs) and any relevant documents available. A lot of detailed information on the topics below has previously been provided to the public inquiry team over the last 3 years.

Professional History

1 Please list your professional qualifications, with dates

A

Registered Nurse Southern General hospital	1988
Diploma in Professional Studies in Nursing GCU	1994
BScHealth Studies GCU	1995
Diploma in Infection Control Nursing Glasgow University	1996
MSc Infection Control UHI	2011

2 Please give your chronological professional history.

a. roles held where and when- please also provide an up-to-date CV

A Registered nurse training: Southern General Hospital Nov 1985-Dec 1988
Staff Nurse (medicine (Haematology)) Southern General Hospital 1988-1991
Senior Staff Nurse (Surgical) Southern General Hospital 1991- 1995
Infection control nurse Hairmyres Hospital (which included a 6-month secondment to IPC forth valley primary care) 1995-2002
Lead infection control Nurse (Victoria Infirmary) 2002-2006
Head of Nursing infection control NHS GGC (Acute) 2006-2008
Nurse Consultant Infection control NHS GGC 2008-2009
Nurse Consultant Infection control ARHAI (formerly known as HPS) 2009 - present

3 What specialist interest / expertise / qualifications in any area of Infection control do you hold? E.g., hospital ventilation, water Legionella control and infection control related to the built environment, and epidemiology and outbreak management.

A I have been working within the field of infection control since January 1995 and have gained a wide variety of infection control experience in both primary and secondary care settings. I have had previous experience with both refurbishments and new hospitals builds, including Hairmyres Hospital and the new Victoria Hospital. I have gained significant experience in incident/outbreak investigation management and control throughout my career as an ICN, Lead ICN and when providing board support from a national perspective, and National IMTS as Nurse consultant. My first role with HPS/ARHAI was to lead the infection control decontamination programme. This expanded and became the Infection control in the built environment and decontamination (ICBED) programme (in 2015) for which I am the clinical lead. With regards to specific built environment expertise and qualifications I have undertaken:

- City and Guilds water in healthcare premises 2017
- City and Guilds ventilation in health care premises 2017
- Specialised ventilation in healthcare premises 2019
- Engineering aspects of infection control 2019
- Water and Wastewater safety in Health Care (HIS) 2024

in addition to attending and presenting at study days/conferences and experiential learning.

Infection Control Team – and the role of HPS

4 Can you describe the arrangements for infection control within NHS GGC (southsector) in 2015? In particular can you describe:

a. structure of department / team.

b. roles and responsibilities (including ICMs, ICDs and ICNs).

c. decision making responsibility.

d. reporting lines, communication pathways and escalation routes

e. governance (committees, Infection Control Senior Management Meeting etc).

A In response to question 4 parts A-E: I was employed by ARHAI in 2015 and had limited interaction with NHSGGCat that time and therefore I am unable to comment on NHSGGC IPC arrangements for that specific time period.

5 Can you explain the respective roles within the infection control framework of:

a. the Microbiology department

b. Estates and Facilities.

c. Public Health; and

d. external experts (i.e., Public Health England).

A The Microbiology department, which includes Microbiologists (and infection control doctors), works alongside the IPCT and plays a key role in the detection and identification of organisms from clinical and environmental samples. It also has a key role in supporting outbreak detection and management and provides expertise, support and advice to clinicians, including the IPCT. It also participates in any research/national activities. The estates and facilities department has responsibility for the maintenance, functionality and cleanliness of the healthcare environment and compliance with national guidance and legislation. It also has a key role in supporting outbreak detection and management and provides expertise, support and advice to clinicians, including the IPCT. It also participates in relevant research/national activities. The estates and facilities department has responsibility for the maintenance, functionality and cleanliness of the healthcare environment, and compliance with national guidance and legislation, such as national cleaning services specification and relevant SHTMs.

The public health department (PH) has a role in infection control in broader terms.

The focus of PH is more towards community and the general public rather than healthcare settings. It is involved in disease prevention, such as vaccine policy, plans and implementation and has a role in training, education, surveillance and outbreak investigation and management.

External expertsoffer specialised knowledge and resources gained from education (formal or informal) and/or experiential learning/experience used to supplement existing infection control approaches and intelligence.

6 Can you describe:

a) The role of HPS in respect of advice, assistance and expertise

A Health Protection Scotland comprised public health and the ARHAI group until 2020 when Public Health Scotland (PHS) was formed, replacing the public health element of HPS and National Services Scotland (NSS) retained the function of ARHAI. HPS was the organisation which co-ordinated health protection in Scotland with the function to protect the Scottish population from infectious diseases, incidents and environmental hazards. ARHAI was and remains the HAI and AMR group within HPS and now NSS. Although part of HPS, ARHAI was distinct with a different SG sponsor and stakeholders, given that the primary focus of ARHAI is healthcare. The role of ARHAI within HPS and as part of NSS has fundamentally remained unchanged. This response describes the role of ARHAI (as part of HPS and now NSS). ARHAI is a clinical service providing national expertise for IPC, antimicrobial resistance (AMR) and HAI for Scotland. ARHAI coordinates the national programmes for IPC and AMR, supports local NHS Boards, other national bodies and stakeholders in the implementation and delivery of six key priority programmes to reduce the overall burden of infection and antimicrobial resistance, in line with nationally agreed priorities.

ARHAI provides expert intelligence, support, advice, evidence-based guidance, clinical assurance and clinical leadership to local and national government, health and care professionals, the general public and other national bodies, with the aim of protecting the people of Scotland from the burden of infection and antimicrobial resistance. As the national organisation responsible for IPCand

Antimicrobial resistance (AMR), we liaise with other UK countries and international counterparts in the delivery and development of these national priority programmes.

b) The role of HPS in HAI reporting (HIIATs etc)

A National guidance for reporting infection related incidents is detailed within Chapter 3 of the National Infection Prevention Control Manual (NIPCM). Thealert organism/condition list within the NIPCM details the minimum list of organisms and conditions which should alert Infection Prevention Control Teams (IPCTs) to their occurrence, allowing them to consider whether further investigation is required. The Hospital Infection Incident Assessment Tool (HIIAT) should be used by the IPCT to assess every healthcare infection incident i.e. all outbreaks and incidents (including decontamination incidents or near misses) in any healthcare setting. The scoring system is used to assess the impact of the incident or outbreak and results in a RAG (Red, Amber, Green) rating, whichdetermines the reporting and communications requirements, including the frequency of reporting throughout the incident or outbreak. IPCTs must complete a Healthcare Infection Incident and Outbreak Reporting Template (HIIORT) for submission to ARHAI Scotland for all incidents. If an incident is assessed as amber or red, ARHAI Scotland then shares this information with SG HAI PU. If an incident is scored as green then the HIIORT is submitted to ARHAI Scotland for information purposes only, unless assistance from ARHAI Scotland is requested, in which case an update for Scottish Government Healthcare Associated Infection Policy Unit (SGHAIPU) is provided. There may also be occasions where ARHAI will forward or highlight a green HIIAT to the HAI policy unit that it should be made aware of.

The HIIORT describes the information required for submission to ARHAI Scotland. There are a number of data specific fields, as well as open fields for descriptive narrative describing the incident, investigations undertaken and controls in place. This reporting form has been designed by ARHAI Scotland to ensure that the appropriate information required to provide assurances to SGHAIPU is received, as well as to develop an epidemiological evidence base and yield lessons learned for sharing nationally. It is not possible for ARHAI

Scotland to evidence whether NHS Boards report all incidents, outbreaks and data exceptions detected by local surveillance systems, as ARHAI relies on NHS Boards to follow NIPCM guidance and ARHAI has no role in identifying local outbreaks and incidents.

c) The role of HPS when National Framework activated

A ARHAI (within HPS) is the lead co-ordinator for the response when the national framework is activated. The role of ARHAI when the HAI policy unit invoke the framework is detailed within the national infection prevention and control manual.

d) The lines of communication as between HPS and SG, including when National Framework is activated

A When the framework is activated SG Health Care Associated Infection Policy Unit (HAIPU) will inform the lead consultant (ARHAI) and advise of the reason. The HAIPU will instruct ARHAI on the expected leadership and co-ordination of all national activity and commination required with the HAIPU.

e) The extent of SG supervision/ coordination/ control, especially with regard to the SG HAI Policy Unit

A This is entirely dependent on the cabinet secretary and related civil servants This varies relating to personnel/subject matter. In my experience this is dependent on how invested the cabinet secretary becomes in a specific incident. An example given is Jeanne Freeman, cabinet secretary, had significant interest in reporting of HIIATs. Her predecessor and successors did not display the same level of involvement.

7 What were your impressions of the GGC infection control team in 2015. Were youaware of any of the following:

a. existing tensions?

b. lack of clarity around roles and decision making?

c. relationships (i.e., between ICM and ICD)?

d. record keeping- did AR or LI take part in this?

e. culture and bullying; and

f. attitude of senior management and board to infection control issues?

A This response covers point a-f:

I was employed by ARHAI since 2009 and therefore, in 2015, I had very limited interaction with NHSGGC IPCT as I did not provide any incident support during that year. I am, therefore, unable to comment on questions 7a-7f for that specific particular time period of 2015. I would however be able to provide a response from 2018 onwards. With regards to point D: AR/LI had no remit or role within NHS GGC record keeping in 2015.

First involvement with QEUH at planning stage

8 Please describe your involvement with the Project Board in 2008. In particular can youdescribe any advice you provided from infection control perspective during the competitive dialogue phase, and whether it was followed.

A I became Nurse Consultant Infection Control in NHSGGC in 2008. As part of this role, I worked closely with facilities (soft FM) and I also had IPCN input into the new adult hospital, similar to the input I provided as an IPCN into the New Victoria Hospital. I was the IPCN representative at the competitive tendering stage, when a number of contractors were bidding for the contract for the new hospitals. I recall attending presentations organised by the project team. I do not recall being specifically asked for any detailed input. My role at this time was to provide oversight on any high-level infection control issues that were discussed during the demonstrations/videos of the overarching hospital design. Nor would I have been in a position or expected to provide decision making or advisory input into systems such as ventilation/water as, at that time, this was very much the remit of microbiology/ICDs. These presentations were high level, covering the design and layout of the buildings. Once the contract was awarded to Brookfield

Multiplex, I provided input to the NHSGGC project team for a short period (until I left in 2009), on areas requested by the project team at design and architectural drawing stage (for the QEUH only), which included matters like room relationships and to the level of what is known as the 1:200 drawings. 1:200 drawings do not cover the details of systems such as water/ventilation. At this stage I worked closely with the architect and healthcare planner employed for the board on this project. I can confirm that I had no involvement in any detail relating to utilities, such as water or ventilation. I had no input and gave no advice on any equipment, fixtures or fittings, such as wash hand basin or tap types. The adult and children's hospitals operated with 2 separate project teams, and I had no involvement with the children's project team. I had no involvement (other than being present at competitive tendering presentations, as this was undertaken for both hospital as a single project) in the RHC. The IPCN input into the children's hospital was provided by the lead ICN for the women and children's directorate.

9 Did you have any further involvement with the design and build of QEUH prior to the hospital opening?

A I had no further involvement with the build stage of the QEUH. From a design perspective, once the contract was awarded to Brookfield Multiplex, I provided IPC input to the NHSGGC project team for a short period (I left in 2009) for the adult hospital only. This was on areas requested by the project team at design and architectural drawing stage (for the QEUH only) which included things like room relationships. I provided advice on appropriate department layouts and individual room plans. At this stage I worked closely with the architect and healthcare planner employed for the board on this project, to the level of what is referred to as the 1:200 drawings. I left NHSGGC and commenced with ARHAI late 2009 and after that I had no further input with NHSGGC QEUH project.

10 Were you required to sign off any design matters? If so, please give details.

A I don't recall being involved in any design matters that required sign off, other than design drawings to the level of 1:200 drawings, which detailed high level department/ward layout: room relationships.

11 Were you involved in writing the SBAR dated 1 April 2014 relating to the pseudomonas risk occasioned by HORNE taps? If so, can you describe how you became involved and what your advice was?

A I was not involved in writing the above SBAR dated April 2014.

12 From an infection control perspective, do you have a view on whether the proximity of the hospital to sewage works causes a risk to patients?

A I am not aware of any evidence that supports the proximity of the hospitals to the local sewage works being a risk to patients. Prior to the building of the QEUH/RHC, the Southern General hospital was on the same site. I worked in the Southern General Hospital from 1985 until 1995, and do not recall any risks or concerns being identified from the proximity of the sewage works, other than, at times, there was a strong, pungent odour.

Early issues with Ventilation (Adult BMT Unit) and – drafting of first SBAR.

13 You drafted an SBAR in 2015 in respect of the Adult BMT. **(Bundle 3 NHS NSS SBARs pg. 36)**

A The responses to this section are covered in detail in the ARHAI BMT Narrative previously submitted to the Public Inquiry.

a) When did the concern arise?

A My understanding is that BMT (adults) was not originally planned to be included in the design specification and this changed around 2013. I am unsure exactly when concern was raised within NHSGGC, however the first contact from NHSGGC regarding this was on 31st July 2015 when NHSGGC requested information on acceptable limits of aspergillus.

b) When was assistance requested from HPS?

A Dr Inkster requested ARHAI support on 13th November 2015.

c) What was the nature of the concern – specifically what was thought to be wrong withthe building system in question?

A NHSGGC Bone Marrow Transplant (BMT) provision was provided at the West of Scotland Beatson Oncology Centre (WOSBOC) based on the Gartnavel Hospitals site. Transfer of this unit was not included in the original QEUH design. I understand NHSGGC agreed in June 2013 to include adult BMT in the design for QEUH and as a result this would not be a purpose-built unit designed for haemato-oncology. Patients were initially transferred to ward 4b from WOSBOC when the hospital opened in 2015. However, following concern raised by an Infection Control Doctor (ICD) related to an increase in fungal counts, including Aspergillus, the patients were moved back to WOSBOC to allow investigation and remedial works to be undertaken within Ward 4B.

NHSGGC initially contacted HPS on 31st July 2015 requesting information on acceptable aspergillus limits. However, whilst Public Health England (PHE) advice was sought, HPS was not aware of any issues in the BMT until November 2015, when Dr Inkster contacted HPS by telephone requesting support from HPS, and seeking expert opinion on the adequacy of a revised specification for the BMT unit at the QEUH after patients were moved out of the BMT and back to Gartnavel. The concerns raised were that the revised specification was less protective than the BMT unit at Gartnavel, which was built to CDC standards.

d) What was the nature of the risk posed to patient safety and care?

A From my involvement via the SBAR, the risk posed to the patients appeared to be that the quality of air being provided to the BMT patients was not of the standard required for protection of this patient cohort and did not offer the additional protection required from organisms such as aspergillus, particularly whilst significant construction / demolition was being undertaken in close proximity. Such protection in this vulnerable patient population, who are at high risk for invasive aspergillosis, would normally be achieved via mechanical ventilation and filtration.

14 Who was advised of this?

A I am not aware of internal GGC communications/discussions relating to this issue. HPS was contacted by Dr Inkster NHS GGC. The request for input/advice on the BMT unit was discussed with key staff across National Services Scotland, including the HPS consultant medical microbiologist on 16th November 2015, HFS on 16th November 2015 and the medical director (HPS) was contacted by the medical director (NHSGGC) in November 2015. The medical director (HPS) confirmed to the medical director (NHSGGC) that I would remain the main HPS contact.

15 Was the advice in your SBAR followed?

A I am aware that on 17th December 2015, the director of facilities emailed Dr Inkster regarding who was accepting the recommendations "*With the HPS intervention at your request and their subsequent report, it is important that we know who is accepting the recommendations on behalf of the Board. It will not be the Project Team as they are responsible for implementing agreed specifications. E.g., SHTM's. Is it you as the infection control expert?"*

However, the NHSGGC chief operating officer advised HPS via email in January 2016 that the NHSGGC Director of Facilities, (Mr David Louden), and his team would discuss with the contractors the implications of the recommendations made.

Discussions between NHSGGC/HPSHFS continued throughout 2016 regarding the recommendations made in the 2015 SBAR. A meeting was held on 16th November 2016 attended by HPS where a request was made by NHSGGC for HPS to review the SBAR of 2015 and update with any recent guidance. This resulted in the SBAR of 2017. Prior to the 2017 SBAR the recommendations made in the 2015 SBAR were not implemented.

16 In your view was the action taken sufficient to address the concern?

A There were no remedial actions taken following the 2015 SBAR and therefore the concern originally raised was not addressed until a later date and following

the 2017 SBAR submitted to NHSGGC. An options appraisal paper produced by NHSGGC on 1st March 2017 discusses that the fourth floor QEUH (where the BMT unit is situated) could not be configured to meet the full specification of requirements, as detailed by HPS. This paper prepared by Gary Jenkins, the NHSGGC regional services director also highlights that a return to level 4 QEUH was unlikely to be a long-term option. ARHAI have had no further input or request for input since submission of the SBAR in 2017 and is unaware whether all or part of the recommendations in the SBAR were implemented.

17 During the emergence of issues in the adult BMTU, what consideration was given tothe adequacy of the ventilation system in the paediatric BMTU?

A HPS was not approached or asked to consider or provide any input into the paediatric BMT until 23rd November 2017. Sandra Devine NHSGGC contacted me to seek advice on a specification that outlined the proposed ventilation to be in place in four rooms used for patients who required bone marrow transplantation. NHSGGC was seeking guidance as to what would be a reasonable approach to monitoring of this environment, in terms of sampling methods, frequency and interpretation of results. ARHAI/HFS provided NHSGGC with an SBAR on 9th January 2018 relating to environmental/ventilation monitoring in Schiehallion ward RHC.

HAI infections in 2015. Bundle 1 IMTs

18 Can you recall HPS being alerted to any HAIs in 2015? If so, can you recall:

a) what was the nature of the infection.

b) was a link to the built environment suspected and if so, in what respect.

c) in what area of the hospital did the infection(s) occur.

d) what sampling / testing was conducted and was a link confirmed.

e) At what stage did HPS get involved

f) what, if any, external reporting occurred.

g) Was there a PAGs or an IMT

h) what control measures were put in place?

i) Whether prophylaxis was administered

j) Were the actions taken sufficient to respond to the incident?

k) Can you comment on the effectiveness or otherwise of the IMT?

A Responding to a-k above

Serratia Marcescens October 2015

NHS GGC contacted HPS out of hours on [redacted] 2015 to report a neonatal death from *Serratia marscesens,* against a background of an increasing incidence of colonisation with *Serratia marscesens* over the previous 5 months. ARHAI became involved on 2nd November 2015 following the Scottish Government invoking the national framework. Having reviewed the submitted HAIORTS it would appear that the focus was on practice/equipment as the source and there was no mention of environmental testing. IMTs were held and ARHAI was in attendance. Control measures included hand hygiene review, review of PPE, review of decontamination of communal equipment. I was not involved in this incident and am unable to comment on the efficacy of the IMT, if prophylaxis was administered and the control measures put in place.

Clostridioides December 2015

HIIAT Green was submitted on 23/12/2015. Clostridioides is a gram-positive anaerobic spore forming bacteria which although can be found in the environment is not considered an environmental organism and out with this scope.

Emerging issues with the water system refer to IMTs.

19 Please describe specific concerns with the water system as they emerged. In relation toeach concern can you explain:

a) When did the concern arise?

b) What was the nature of the concern – specifically what was thought to be wrong withthe building system in question?

c) At what stage did HPS become involved?

d) What was the nature of the risk posed to patient safety and care?

e) Was any action taken sufficient to address the concern?

A HPS was not aware of any issues with the water system in 2016. NHSGGC did not report to HPS or seek support from HPS with the water system in 2016.

20 In particular, was HPS involved in any of the following issues:

a) Water temperature: problems with energy plants – hot water temperatures are nothigh enough to prevent/tackle bacterial growth.

b) Flow straighteners / regulators / tap type

c) Debris in pipes

d) Single room design – water outlets increased; flushing regimes; risk of stagnation.

e) Pipe size and storage volumes; encourages water stagnation

f) Wet rooms and floor levels

g) Drainage system

A HPS had no involvement with any of the issues highlighted in a-g above, with the exception of HPS involvement when NHSGGC sought advice on the taps/flow straighteners procured for the new hospital. This is covered in detail in the SBAR, and narrative has previously been provided to the public inquiry team.

21 DMA Canyon Reports

a) When were you first made aware of the DMA Canyon reports? How did this come about?

A I cannot specifically recall the exact date that I received the DMA Canyon report, however it was around 2019, as part of the support into the investigation of the contaminated water systems QE/RHC and supporting the associated IMTs.

b) Some witnesses (e.g., Christine Peters) have said that, had they had sight of the 2015 reportat the time, they would not have allowed the hospital to open. Do you agree?

A When HPS first had sight of this report, the contents were concerning. This was particularly relevant given that HPS had provided ongoing support into a water contamination related incident with linked patients since 2018 and were unaware of this report until around 2019. Had HPS been asked to provide comment/ response to the DMA Canyon report at the time of publishing or NHSGGCs receipt of the report, HPS would have discussed this with colleagues in HFS and expressed concern to the board regarding the findings/content and the impending opening of the hospital and would have suggested the formation of an action plan to address the issues raised in the report prior to occupation. In light of the potential patient safety and IPC issues identified in the report, it is likely HPS/HFS would also have offered support to complete/review any action plan. It is also likely that HPS would have highlighted the findings to the HAIPU.

22 Water Technical Group

Refer to **Water Technical Group Bundle (Bundle 10)** to assist.

You sat on the water technical group (WTG)

a) What is the purpose of WTG and why was it set up?

A The water technical group was facilitated and set up by NHSGGC. It was established at the request of the IMT Chair (Dr Inkster) in March 2018 to provide support to the ongoing IMT and review water sampling results, consider remedial actions, including point of use filter fitting/replacement, review disinfection options, including chlorine dioxide dosing, drain cleaning and tap replacement.

b) Who else was in the WTG, what were their names and their roles within WTG?

A The membership of the water technical group varied over time, initially supported by HPS/HFS. Whilst the membership/attendance at the group varied: The initial and regular membership included:
Mary Anne Kane (interim director of facilities) (chair), Iain Powrie (Facilities) Iain Kennedy (CPHM) Teresa Inkster (ICD) Annette Rankin (HPS) Ian Storrar (HFS) Eddie McLaughlan (HFS), Colin Purdon (Facilities) Alan Gallagher (Facilities), External membership of T. Wafer and T Makin at several (not all meetings).

Over time the membership changed, with HFS/HPS no longer required; Dr Inkster no longer present and Dr Leanord and S. Devine in attendance.

c) With reference to specific WTG minutes, what issues came to light as a result and whatactions were taken?
The WTG mainly met after an IMT and would discuss any related findings from the IMT. The issue that was emerging was the extent of the widespread contamination of the system with gram negative organisms. The WTG reviewed water testing results, any issues with point of use filters and whether the fitting of these filters was appropriate. The options for the decontamination of the water system were explored: these options included thermal disinfection and chloring dioxide dosing.

d) What were the concerns of the WTG and how did this impact on patients?

A The aim of the water technical group was to support the IMT and work towards a microbiologically safer water system, particularly in light of the extent of the spread of positive results being obtained. As discussed previously, these included installation of point of use filters, water testing and implementation of routine chlorine dioxide dosing. The main concern was the ongoing reporting of cases at IMTs and positive water system results.

e) How did clinical staff and estates get along at these meeting?

A It was routinely Dr Inkster, Dr Kennedy and myself as the clinical representation

at these meetings. At that time Mary Anne Kane (acting director of facilities) was the most senior facilities member who attended and chaired the meetings. These meetings were very amicable, and discussion was facilitated with mutual respect. There was no tension between individuals or disciplines and everyone's input was encouraged.

f) What specific guidance and advice did you give as HPS/ ARHAI representative? Was this advice followed?

A As a member of the group representing HPS, I participated in discussions, including remedial actions and control measures. I cannot recall specific advice given and do not recall there being any concern that specific advice was not being considered/followed.

HAIs in 2016 (Bundle 1 IMTs)

23 Was HPS involved in any of the following incidents? If so, can you respond to the questions a-k in question 13 above.

a) Aspergillus cases in June?

A On 5th August 2016, NHSGGC reported an increased incidence of aspergillus in patients in ward 2A RHC to HPS. There were 2 cases (one confirmed, one probable). These numbers were higher than expected in this patient group. These were non –BMT patients in the early stages of treatment for haematological malignancy. The first case became symptomatic on 29th June 2016. An IMT was held by NHSGGC on 5th August 2016. I was not involved in this, and I am unable to comment on the efficacy of the IMT, specific details on sampling and whether a link with the environment was confirmed.

The hypotheses, investigations and control measures stated in the HIORT are cited as: -

- Contributing factors
- tear identified in ventilation ductwork - now repaired
- condensation from chilled beams creating damp conditions and dust
- construction /demolition work on site

- Control measures

- increased cleaning - twice daily A.plus (dust reported on unit)
- prophylaxis for high-risk patients with AmBisome
- portable HEPA filter units
- enhanced surveillance for new cases
- Investigations
- air sampling
- inspection for water damage

The incident was closed on 17th August 2016 - noted that the estates issues during the investigation were addressed by NHSGGC.

b) 8 cases of Serratia in August 2016?

A GGC contacted HPS on 28th July 2016 regarding 8 patients colonised with *Serratia marcescens* in the neonatal unit. I was not involved in this incident however, on reviewing the submitted HIIORT from NHSGGC, there were several IMTs held. I cannot comment on the efficacy of the IMT. Water sampling was undertaken and reported as negative. This was assessed as HIIAT Green. In total there were 12 babies found to be positive. The incident was closed on 14th October 2016.

c) Cupriavidus in the aseptic sink?

A This was reported to HPS in 2016 via the weekly HIIAT green reporting, with no HPS support requested. At this time HIIAT green reporting to HPS where no support was requested, allowed boards to report incidents with minimal detail.

24 Can you comment on any other HAIs you were involved with throughout 2016?

A There were a number of HIIATs reported to ARHAI by GGC in 2016 (in addition to those covered above), however I was not involved in these and therefore I am unable to provide a detailed response.

25 Throughout 2016 there were ongoing issues with ventilation in the Paediatric BMTunit. Can you describe your involvement in this?

A I had no involvement throughout 2016 with paediatric BMT unit issues with ventilation, however following a meeting with Dr Jones and S Devine in late

2017, an SBAR was produced for NHSGGC relating to environmental/ventilation monitoring in Schiehallion RHC in January 2018. This SBAR has previously been submitted to the public inquiry.

26 Alan Seabourne sent an email in 2016 which contained the following statement (refer to Estates bundle)

Annette Rankin was the person responsible at design, dialogue and evaluation forensuring that appropriate liaison and communication with the IC department andMicrobiology was conducted effectively.

a) Do you agree with Mr Seabourne's description of your role?

A I do not agree that this statement is an accurate reflection of my role at that time. My role during the short period of time that I worked with the new hospital project team in 2008/2009 was for the adult QEUH hospital only. The children's hospital was the remit of the Lead IPCN for women and children. I was not responsible for liaison or communication between the new hospitals project and GGC microbiology. However, I was part of the wider group who attended at the competitive bidder stage, to hear presentations on the new hospital proposals. Whilst I was aware of who the successful bidder was, I was not involved in any detailed dialogue relating to the scoring of the bids or the selection of the preferred bidder.

From a design perspective, once the contract was awarded to Brookfield Multiplex, Iprovided IPC input to the NHSGGC project team for a short period (I left NHSGGC in 2009), for the adult hospital only. This was on areas requested by the project team, at design and architectural drawing stage (for the QEUH only), which included matters like room relationships at 1:200 level. I provided advice on appropriate department layouts and individual room floorplans, to ensure that the clinicaldesign/floorplans for the new adult hospital limited the spread of hospital acquired infections. At this stage I worked closely with the architect and healthcare planner employed for the board on this project. I had no involvement in any detail relating to utilities, such as water or ventilation. I had no dialogue or discussion on ventilation including, chilled beams, natural ventilation, thermal wheels or air changes. At this time (2008/2009) such matters were the remit of the microbiologist/ICD. I had no input and gave no advice on

any equipment, fixtures or fittings and, in particular, had no input into wash hand basin or taps type. I am unaware of the input provided at that time by the IPCT management team/microbiology. I left NHSGGC in November 2009 and had no further input with the NHSGGC QEUH project.

b) Do you have any other comments on this issue?

A I have no other comments. I left NHSGGC in 2009 and can only comment on my input until that time. I am unclear on the role/remit of my successor or the IPCT management team.

27 Please describe any other issues with the built environment which arose in 2016.

A I was not employed by NHSGGC in 2016 and I am unable to comment, other than providing an SBAR in 2015 for BMT, as previously described, and ongoing input relating to this until an updated SBAR was provided in 2017.

Paediatric Bone Marrow Transplant Unit and writing of the 2017 SBAR (Bundle 3 pg. 57)

The responses to this section are covered in detail in the ARHAI BMT Narrative previously submitted to the Public Inquiry.

28 Can you advise how you came to write the 2017 SBAR? When did you first become involved?

A Following submission of the 2015 BMT SBAR to NHSGGC there was ongoing communication between HPS and GGC throughout 2016. NHSGGC requested HPS to review the 2015 SBAR, to identify if there had been any change in the literature that would impact on the SBAR. There was no change in literature or guidance identified, however the SBAR was updated and reissued to NHSGG.

29 Can you explain:

a) When did the concern arise?

b) When was assistance requested from HPS?

c) What was the nature of the concern – specifically what was thought to be wrong with the building system in question?

d) What was the nature of the risk posed to patient safety and care?

e) Who was advised of this?

f) Was the advice in your SBAR followed?

g) In your view was any action taken sufficient to address the concern?

A This is answered in detail in section D above: for the 2015 issue and was a continuation of the issues raised and risks posed. On submission of the 2017 SBAR no further input or support from ARHAI relating to the adult BMT was requested.

30 Can you comment on any of the following? Were HPS Involved?

a) Positive Pressure Ventilated Lobby (PPVL) isolation rooms. Suitability for (i) immunosuppressed patients and (ii) infectious patients.

A Both HPN 04-01 supplement 1 and SHPN 04 supplement 1 advise "*This supplement does not describe the specialist facilities required in infectious disease units or on wards where severely immuno-compromised patients are nursed. Guidance for these facilities will follow in a further supplement to HBN 4".* This additional documentation has not been provided to date.

i. risks posed to patients by PPVL rooms.

A The guidance at the time had immunocompromised patients as a group of patients who were excluded from these rooms. Evidence is still required in this area to fully support the use of PPVL rooms for this patient cohort. The risks are that vulnerable patients are at risk from infection and the rooms require to be built to the exact specification to ensure infection exposure is minimised. An example is the risk posed by aspergillus when rooms are inadequately sealed.

ii. scientific disagreement over the use of these rooms.

A There remains disagreement and a lack of evidence for their use with immunocompromised patients, particularly with regards to airborne transmission. PPVL rooms however do have their place in other settings, such as general ward areas for isolation of patients with infections.

iii. what happened in the QUEH/RHC?

A The detail/engineering components are outwith my area of knowledge and I had no involvement in the PPVL rooms, however my understanding is that these rooms were not built to the required specification outlined in HBN04-01 supplement 1. Particularly with regards to the placement of ventilation grilles, provision of ensuites, and inadequate or incomplete sealing.

b) Thermal Wheel technology.

i. risks posed to patients by thermal wheel technology.

A I do not fully understand the engineering detail, however I believe that the dirty extract mixes with the clean supply and therefore can pose a risk of infection to vulnerable patients.

ii. what happened in the QEUH/RHC?

A I am aware they were present but cannot comment on the impact.

c) Chilled beam technology.

i. risks posed to patients by chilled beam technology.

A In haemato-oncology units the rooms require to be completely sealed with a solid ceiling, however chilled beams do not allow this. In addition, they may present a risk of condensation and require a high level of cleaning and maintenance.

ii. what happened in the QEUH/RHC?

A I am aware via IMTs of reports of condensation or water leaking on to a patient's bed, in addition to reports of these being very dusty at times. I was also present

at an IMT where results sampled from water from the chilled beam *yielded Pseudomonas olivorans* and *Pseudomonas aeruginosa*.

d) Are you aware of any other risks related to ventilation such as cleaning of vents andongoing building work?

A I was not working on the QEUH/RHC site and am not aware of any other risks in 2017. I do not recall HPS being asked for input into any of the above covered by question 26.

27. There were cases of Aspergillus case in 2A. Can you describe your involvement in this asper question 13 above?

A This was reported to HPS as HIIAT green with minimal detail. I note that a PAG was held and within the notes from the PAG it is mentioned that this was discussed with myself. I have no recollection of these discussions so am unable to provide any further information.

28. There were three fatalities from Stenotrophomonas in 2017 (refer to PAG (**Bundle 2 page 44)** to Dr AlanMathers SBAR of 2017) Were you involved? If so, can you describe your involvement?

A I had no involvement with Dr Mathers' SBAR of 2017 and was not aware of the content of this SBAR.

On 26th July 2017 NHSGGC reported two patients with Stenotrophomonas bacteraemia within Ward 2A Royal Children's Hospital NHSGGC, within 8 days. Both of these cases were being considered by GGC healthcare acquired infection. The cases reported were defined as invasive and had resulted in delays to treatment for patients. HIIAT assessed as Red. Whilst I was aware of this incident as I received the updates from HPS, I was not involved until 14th August when HPS were advised by NHSGGC that the typing results for the 2 cases that led to the PAG were both unique and the interpretation made was that they were unrelated. NHSGGC asked if we (HPS) required regular HIIORT updates. I advised that if this incident was being downgraded to green then no further updates were required (in line with the process in place at that time), however if it was to remain red or amber then further updates were required,

until reassessed as green. NHSGGC reassessed as green. I advised the HAIPU that the incident was now green with no further updates expected, however NHSGGC were content to provide updates on one patient's condition if the HAIPU required this. I had no further involvement in this incident.

29 Are you aware of any other HAIs in 2017? If so, please reply to questions a-k in question13 above.

A I have limited this response to those deemed to have a potential environmental link. In addition to those described above, NHSGGC reported a number of incidents. Limited details were reported when HIIAT green was reported: information below is what was provided by NHSGGC to HPS: -

- On 6/2/2017: 2 cases of Serratia colonisation reported from PICU RHC HIIAT green:
- On 3/3/17 2 cases of Serratia were reported: one colonisation, one infection from Neonatal intensive care, RHC. HIIAT Green.
- On 3/3/17 3 cases of *Elizabethkingia miricola* bloodstream infection were reported since September 2016 from wards 2A/B (paediatric haemato-oncology). An action plan was put in place with a focus on the environment. HIIAT Green
- On 3/3/17 General increase over January/February in number of positive blood cultures with mixed organisms reported. Review of cases ongoing
- On 7/3/17 NHSGGC reported an increased incidence of aspergillus in patients in ward 2A RHC over the past seven months. The cases reported were defined as invasive and had resulted in delays to treatment for some patients. Estates undertook a clean of all vents and chilled beams. Patients were asked to wear a facemask if going down to the main entrance as there were building works taking place. Prophylaxis was commenced for all patients on induction of treatment. Regular air sampling was being performed. No IMT was held. On 19th April 1 possible new case was reported based on radiological and clinical evidence. A leak in the ceiling had been reported in the ward area approximately 2 weeks earlier. On inspection mould was found on the tiles. Subsequent high particle counts from adjacent rooms were identified. Work being carried out urgently to replace mouldy tiles. The ward was closed due to rotavirus/astrovirus at that time (not aspergillus).

- Incident was de-escalated to green and closed on 28th April 2017. Ongoing monitoring of the environment was to continue. HPS updated the HAIPU with each HIIORT submitted by NHSGGC.
- On 10/3/ 2017 NHSGGC reported 3 cases of *Serratia marscesens* in Paediatric intensive care unit (PICU). This was assessed as HIIAT AMBER. No HPS Support was requested. It was also reported there was a general increase in environmental gram negatives (Serratia, pseudomonas, Acinetobacter, Stenotrophomonas). Water testing was undertaken and no growth of Serratia found. No IMT held. HAIPU updated by HPS.
- A further HAIORT was submitted on 14th March and the HIIAT de-escalated to GREEN and incident was closed.
- On 2/8/17 2 cases of blood stream infection (1 infection, 1 colonisation) with pseudomonas in PICU, RHC. HIIAT Green.
- On 3/8/17 3 cases of Stenotrophomonas associated with NICU reported.
- On 11/10/17 2 cases of Acinetobacter baumanii colonisation reported in neonatal intensive care, RHC. HIIAT Green. PAG held.
- On 13/10/17 1 new case and 2 existing cases reported of Acinetobacter colonisation in a general medical ward, QEUH. HIIAT Green.
- On 27/10/17 Probable invasive fungal infection/Aspergillus fumigatus HIIAT Green. NICU.
- On 15/11/17 2 cases of *Acinetobacter baumanii* reported from PICU, RHC. One considered HAI to PICU, the other to ward 1E however there is also an epidemiological link to HAI cases in September and October. HIIAT Green.
- On 1/12/17 Three cases of the same type of *Acinetobacter baumanii* surgical site infection reported (from October, November and December) possibly linked to the same bay in PICU, RHC. HIIAT Green

The above incidents reported as HIIAT Green: I am unable to provide detail relating to IMTs, efficacy of control measures, prophylaxis.

HAI INFECTIONS in 2018

30 For EACH INFECTION on Wards 2A and 2B in 2018 can you answer the following questions

a) what was the nature of the infection.

b) was a link to the built environment suspected and if so, in what respect.

c) in what area of the hospital did the infection(s) occur.

d) what sampling / testing was conducted and was a link confirmed.

e) At what stage did HPS get involved

f) what, if any, external reporting occurred.

g) Was there a PAGs or an IMT

h) what control measures were put in place

i) Whether prophylaxis was administered

j) Were the actions taken sufficient to respond to the incident?

k) Can you comment on the effectiveness or otherwise of the IMT?

A The response to the above addresses the water contamination incident and related infections covered by the IMTs rather than each infection individually.

NHSGGC submitted HIORTS to HPS on 2nd, 9th and 12th March 2018, gram negative blood stream infection in wards 2A/B. On 16th March 2018 HPS was asked to support an IMT investigation with a potential water (environmental link). HPS had involvement thereafter at a number of subsequent IMTs until the IMT closed on 27th March 2018. HPS updated the HAIPU. At risk patients were given prophylaxis. Control measures at this time included limiting access to water, including showers. The IMT was chaired by the lead ICT and worked effectively.

A PAG was held on the 18th May 2018, an IMT on 29th May and HPS was in attendance at IMTs from 4th June 2018, due to an increase in cases of blood stream infection with Enterobacter. The hypotheses considered was related to the drains with black grime being reported as emerging from the drains. Prophylaxis was restarted and admission to the wards was limited to an assessment on a case-by-case basis. Control measures included drain cleaning and environmental decontamination with hydrogen peroxide vapour. The HAIPU was updated by HPS after each IMT. From January to June 2018 there were 17

cases associated with wards 2A/B: 6 Enterobacter, 9 Stenotrophomonas, 4 pseudomonas, 2 Acinetobacter, 1 Cupriavidus, 1 Pantoea. The IMT closed on 21/6/18. The IMT was chaired by the lead ICT and worked effectively.

An IMT was reconvened on 5th September 2018 following 3 cases of blood stream infection reported since 5th August with drain associated gram negative organisms. HPS was in attendance. It was reported that drains had been swabbed on 29th August following reports that grime was visible in the drains and samples matched 2 of the 3 cases reported. HPS updated the HAIPU. Control measures included drain cleaning throughout 2018. The findings are detailed in the reports published in May 2018 and December 2018. In summary the infections were environmental gram-negative blood stream infections with a suspected link to the water system. The infections mainly involved children from wards 2a,2b, but also some from the paediatric intensive care unit. ARHAI regularly updated the HAI policy unit. Control measures included the fitting of point of use filters on water outlets. The IMTs in 2018, which were chaired by Dr Inkster, were managed and worked well, discussing prophylaxis (if required), control measures and any additional subsequent actions. Minutes were issued timeously, which accurately reflected discussions.

Decision to close wards 2A/2B and move to 6A and 4B

31

a) Can you describe the events leading up to the decision to close wards 2A and 2B?

A There had been a number of IMTs in 2018 (as detailed above) relating to an increase in gram negative blood stream infections associated with the water system. At an IMT on 13th September, which was being held due to an increase in gram negative blood stream infections and thought to be related to the drains, discussion took place on drain decontamination. The IMT recommended consideration of a short term decant to allow drain decontamination to take place and for a physical review of the environment to identify a permanent solution. This was further discussed at an IMT on the 14th September 2018 and a number of potential options were considered. It was noted that the

recommendations from the IMT were for the executive management team (EMT) and had not been confirmed.

In addition, it was discussed that the Scottish Government had asked if there were any options to move the patients out with the hospital/area temporarily and requested assurances that the children were safe. At the IMT on 17th September Kevin Hill advised that a meeting was held by the executive management team after the IMT, and the recommendations were discussed. The EMT concluded that it would wait until a drainage expert gave a preliminary review on how they would carry out their work. The EMT would wait to see what was found. The IMT continued to recommend a temporary relocation. On the 18th September the chief operating officer attended the IMT and advised that following a meeting that morning it was agreed that the BMT patients in ward 2A would be decanted to ward 4b and the majority of the other patients in the haemato-oncology ward (2A/B) would go to an alternative 28 bedded ward within the QEUH. No final decision had been made with regards to a date or which ward.

At the IMT on the 19th September 2018 the chief operating officer advised that ward 6A would become the decant ward, with existing patients in 6A being relocated to ward 2C Gartnavel General Hospital. On the 20th of September it was agreed that there needed to be a focussed detail on IPC aspects of the IMT and a separate operational needs focus and therefore this would be split into 2 separate meetings. It was agreed that the incident would remain at HIIAT amber until the relocation of the patients back to wards 2A/B. It could be escalated to red if required but it would not go below amber.

b) Can you describe the involvement of 1) HPS and 2) Scottish Government in thisdecision?

A HPS was a member of the IMT from March 2018 and participated in discussions relating to relocation of the patients. Scottish Government was not involved in this decision-making process as it was not an IMT member, however, HPS provided it with an update after each IMT meeting. It was noted at the IMT on 14th September 2018 that Scottish Government had asked if there were any options to move the patients out with the hospital/area temporarily and

requested assurances that the children were safe.

c) Can you comment on

i. the options assessment

A I recall a number of options being discussed/raised at IMTs: these included:

- the WoSCC, which although the preferred option, presented clinical challenges, includinghaving no paediatric intensive care on site and, if a child required PICU intervention orcare, this would require the transfer of a critically ill child by ambulance back to the RHC.
- A stand-alone temporary unit installed on the hospital site was also discussed, however this would not be an immediate solution as it would take several weeks/months to install.
- Temporary relocation outwith the hospital to either Edinburgh or Newcastle however it was unlikely there would be sufficient beds./ward available. The logistics or providing staff to these areas and the impact on patients and families was significant
- A ward on the adult QEUH site was considered, which would allow ease of access to supporting facilities on the RHC site and out of hours medical cover. Ward 6a was selected by the EMT and patients who were then in that ward would be relocated within ward 2C Gartnavel General Hospital without impacting their care.

ii. suitability of ward 6A / 4B for Schiehallion patients; and

A Ward 4b cared for adult bone marrow transplant patients. It had remedialwork undertaken to increase the ventilation specification. Therefore, this was a reasonable consideration for short term decant of paediatric haemato-oncology patients. Ward 6a, whilst not the equivalent specification, was initially intended as a short term decant only (4 weeks) and required mitigations such as point of use filters was considered to be the most viable option.

iii. steps taken to prepare ward 6A to receive Schiehallion patients.

A Preparation was undertaken by NHSGGC.

Incidence of HAIs on Ward 6A

32. Concerns about HAIs began to emerge on ward 6A following the inhabitation by Schiehallion patients. For each infection on Ward 6A post decant can you respond to the questions a-k in 14 above

A Having reviewed the reports ARHAI have from NHSGGC, there was one incident reported relating to ward 6a (prior to temporary decant to CDU). This was Cryptococcus neoformans involving 2 patients. 1 adult, 1 child. HPS did not attend IMTs however was provided with updates which were then passed to the HAIPU.

Whistleblowers

33. Throughout 2018 there were ongoing Whistleblowing procedures involving several Wards. Were you aware of this at the time? What was your perception of it?

A I was not aware of whistleblowers throughout 2018.

2019

Cryptococcus

A detailed response on HPS input into John Hood's report and the cryptococcus subgroup has been provided to the inquiry. The response previously submitted covers this in more detail.

You sat on the Cryptococcus subgroup – (**Bundle 9- Cryptococcus subgroup minutes**)

34. Had you seen/ heard of Cryptococcus in a healthcare setting prior to QEUH?

A I was aware of cryptococcus; however, I had never been involved with either a suspected or confirmed case of cryptococcus prior to QEUH, either clinically in my nursing career or throughout my years in IPC.

35. What were the issues with Cryptococcus at QEUH? When did you first become aware of these issues? What happened in response to these issues?

A Whilst HPS was aware of the 2 cases of cryptococcus via the HIIAT reports, no HPS support was requested and therefore information was based on the HIIATs submitted and the information provided in the HIIAT reports from GGC, rather than attendance at an IMT.

36 What was your involvement at the Cryptococcus Sub-Group Meetings – refer to the minutes - actions taken, internal escalation: HPS involvement.

A Whilst HPS was not a member of the IMT, it was invited to be part of the subgroup which was being formed to explore a number of hypotheses raised by the IMT and discussed at the IMT and produce a report with recommendations for the chair of the IMT. My involvement in the subgroup was attending meetings (where possible) and reviewing and providing comments on the draft report.

37 What, if any, external reporting occurred?

A The subgroup was chaired by NHSGGC: HPS did not report any details externally.

38 What steps were taken in response/ precautions put in place?

A The subgroup was not part of the IMT. It was the remit of the IMT to manage the incident and put control measures/precautions in place. HPS was not a member of the IMT, so I am unable to comment on the control measures.

39 Did you read John Hood's report? If so, when?

A A detailed response on HPS input into John Hood's report has previously been provided to the inquiry.

In summary:

I have read and commented on the report in conjunction with 2 of my colleagues who were also in the group (Ian Storrar, Susie Dodd). There have been multiple versions of the report and there was poor version control. The following summary of when the reports were read is based on an email review.

NSS first received the "draft 2" version of the report on 16th August 2019, for discussion at the subgroup meeting that same day. On 23rd August 2019, an email containing Draft 2 of the report was shared for comments and discussion at the meeting scheduled for the same day. The document entitled "Draft 2" was watermarked "Draft 1 130819".

A final report was issued to NSS on 7th April 2022, by NHSGGC. Over the lifespan of the Cryptococcus Incident Management Team Expert Advisory Sub-Group there were a number of draft reports shared with NSS by NHSGGC. In addition to draft reports, some meeting minutes would include text for inclusion within the draft reports. There was no version control of draft report documents and therefore it was difficult to tell which version was most up-to-date, or indeed on which document NSS was being asked to comment.

NSS's search has identified 10 draft reports shared prior to the final report being shared on 7th April 2022. Noting the difficulties previously stated regarding version control, I cannot be confident that this represents the total number of draft reports shared by NHSGGC.

40 What is your opinion of it- to what extent do you agree/ disagree with its findings?

A In addition to myself, NSS had 2 other representatives on the SLWG and reviewing the report. Due to poor version control and lack of clarity on how evidence from the literature was being sourced and applied, we expressed concern over the report. NSS submitted a large number of comments on the draft reports. It was unclear whether the comments raised were being considered or addressed. There was significant communication with GGC

regarding the report, resulting in the ARHAI clinical lead liaising with NHSGGC. It was agreed that the final report would be a GGC produced report and not one from the SLWG, as the 3 NSS representatives were not in total agreement with the report and its findings. One of the main challenges was the lack of transparency over the literature being selected and used to support/disprove hypothesis. There was concern that there was potential selection bias. HPS offered to undertake a literature review. This offer was at first refused and then laterally accepted. There were significant comments on the reports shared, however it was unclear the impact these comments were having on the report and often the meetings to discuss the report focussed on discussing the comments submitted by HPS/HFS without a clear outcome as to whether the comments were being taken on board or otherwise.

41 What actions were taken following the John Hood report?

A The report was finalised as a GGC report and there were no outstanding actions for ARHAI.

42 What else could have been done? How could matters have been handled differently?

A A literature review utilising agreed methodology undertaken at the start of the SLWG, to support the work and the findings of the group would have been beneficial. Clear discussion on the hypothesis and report production including version control and consultation.

43 What concerns did you have about how matters were dealt with?

A It was not clear whether the comments on the report being made by NSS were being incorporated into the report and it became difficult to progress. The ARHAI clinical lead was approached, who engaged with NHSGG, and the outcome was the report was not authored by the SLWG but became a GGC produced report.

44 The Inquiry has become aware of at least two other cryptococcus cases from QEUH.Are you aware of this? If so, please describe your involvement.

A My colleague (Susie Dodd) was made aware via a cryptococcus subgroup meeting on 26th November 2021. The chair mentioned at the start of the meeting that there were 3 potential new cases of cryptococcus that would be discussed later in the meeting. Unfortunately, ARHAI had to leave the meeting, but followed up with GGC the following day. ARHAI advised GGC that the last case reported to ARHAI was a child related to ward 6a in July 2020. This was later discounted as a case due to the result being considered a false positive. An update was requested by ARHAI on the 3 potential new cases. GGC responded that the cases were historical cases as far back as 2010 and that Dr Hood was reviewing them.

Short-term Decant from 6A – refer to IMTs.

45 Can you describe the events leading up to surrounding the decision to transfer patients out of 6A?

A HPS was not involved in the events leading to/surrounding the decision to transfer patients out of 6a. This decision was taken by the cryptococcus IMT and HPS was advised of this via a HAIORT, that all patients in ward 6A moved to clinical decisions unit for a period of 4 weeks, to allow completion of remedial estates work.

46 Can you describe the involvement of 1) HPS and 2) Scottish Government in this decision?

A HPS were not involved in this decision. I am not aware that Scottish Government had any involvement.

47 Can you comment on

a) the options assessment.

b) suitability of the other wards (4B, 1, RHC and CDU) for Schiehallion patients; and

c) steps taken to prepare these wards to receive Schiehallion patients.

A HPS had no involvement in any of the above.

48 Are you aware of the remedial work to be done on Ward 6A? Was HPS involved?

A I was not aware of the remedial works being undertaken at that time. HPS were not involved.

49 Transfer of patients back to 6A. Can you describe events surrounding this decision? Were HPS/ SG involved?

A HPS were not involved, and I am unable to describe events surrounding this decision.

P HAI Incidents post reopening of ward 6A- to end of 2019 – (Bundle 1- IMT minutes)

50 For each incident can you respond to questions a-k in para 13 above?

A The first HAI reported to HPS (apart from cryptococcus Dec 2018) was following an IMT held on 19th June 2019. A PAG had been held on 3rd June 2019 to discuss 4 cases of gram-negative blood stream infection. In addition, the IMT was informed of a patient case of *Mycobacterium chelonae*. A further IMT was held on 25th June 2019, HPS was in attendance. It was reported at this IMT that there had been 6-gram negative blood stream infections over the previous 3-month period. In addition, 2 cases of M. Chelonae over the previous 12 months. Water sampling had identified 3 shower heads and a tap in the domestic services room positive for mycobacterium and samples taken from some taps without filters (outwith 6a) showed evidence of fungi growth.

At the IMT on 3rd July 2019 2 further patients positive for pseudomonas putida were reported.

On 1st Aug 2019 a further 2 cases were reported, one with Chryse monas and one *Enterobacter cloacae*. At this IMT it was reported that air samples taken from en-suite bathrooms on 15th July (as part of the ongoing cryptococcus investigation) found small counts of pathogenic fungi, like aspergillus. It was agreed at this meeting that the schedule of cleaning the chilled beams would be increased to 6 weekly (instead of 6 monthly). The hypotheses for the previously reported *M. chelonae* was considered to be exposure to unfiltered water (water outwith ward 6a) and this section of the IMT was closed. The hypothesis for the gram negatives was currently unexplained, however the IMT agreed that the filtered water was unlikely to be the source and consideration was given to the chilled beams as a source. It was also agreed that not only the number of gram negatives, but the nature of the organisms was concerning.

At the IMT on the 8th August it was reported that of the 4 samples (2 hot, 2 cold) taken from the chilled beams: the cold-water samples returned a heavy growth of *Pseudomonas oleovorans*, and small number of *Pseudomonas aeruginosa*. Dr Inkster also noted a colleague had reported a swab from a chilled beam grille in June had grown *P. oleovorans*. This was suggestive of a leak from the circulating water. Swabs taken from the chilled beams from patient rooms yielded light growth of gram negatives including Klebsiella, Acinetobacter and Pantoea species. Clinical staff expressed concerns over being in a ward with chilled beams however the whole campus had chilled beams. The deputy medical director agreed to discuss with the medical director to identify any possible area that could house the patients in 6A: it was noted however that the IMT could make recommendations regarding decant, but the final decision would be endorsed by the chief executive. An options appraisal meeting was planned to look at possible solutions should ward 6a be relocated. It was also noted that the HIIAT process was that the final decision on releasing a press statement irrespective of the HIIAT score lay with the IMT chair, but whilst communication should come from the IMT it was senior management who had the final say on press releases and not the IMT chair. The IMTs continued until 14th November 2019. The chair of the IMT changed mid-way through the incident. This is covered further in Qs 50 and 51.

51 In particular can you comment on the following IMTs

a) 14th August 2019 –especially with regard to conduct and interpersonal relationships

A I cannot give a recap of this entire meeting, however, from memory, I recall the IMT on the 14th August 2019 commencing with a more negative tone than some of the previous IMTs. In particular there was a lot of discussion on the draft previous minutes circulated from the IMT held on the 8th August 2019, which named the chief executive and stated "*Kevin Hill hasasked if Ward 4B could give more beds to the paediatric service but they are currently in no position to move patients out with the ward over the next4weeks. Dr Scott Davidson will ask Dr Jennifer Armstrong Medical Directorto see if there is anywhere that could house patients from Ward 6A. The final decision would need to come from Jane Grant the Chief Executive*". There was a lot of discussion/request to remove the name of the chief executive from the minutes. It was only the chief executive's name that was being discussed for removal. It was agreed after much discussion that the name would be removed but the title would remain. There was no request to remove any other name in that paragraph in the minutes. Dr Inkster requested that going forward it may be helpful if meetings were recorded to allow accurate reflection of the discussions that took place. There appeared to be significant tension around the table. There was discussion on the case definition and the deputy medical director emphasised that the numbers of blood stream infections had not increased, as highlighted by Dr Kennedys epidemiology report. This sparked much discussion as some members disagreed with this statement (myself included), as not only was there an increase in number, they types of organism seen were environmental in nature and very unusual. In addition, Dr Kennedy's epidemiology report covered all blood stream infections (gram positive and gram negative) and as the gram-positive rate, often linked to practice, and as a result of significant work undertaken by the clinical team, was very low, this gave a false assurance on overall numbers.

There were also 2 microbiologists present who had been invited to discuss findings from chilled beam sampling and unusual epidemiology compared to the previous Yorkhill site. These discussions created significant tension and disagreement between clinical staff and managerial staff. Whilst this IMT was

challenging as some of the findings and associated risks being presented were being vehemently disputed by some of those present, the meeting was very well chaired by Dr Inkster.

b) 23 August 2019 – events surrounding the appointment of Dr Crighton as Chair. Wereyou surprised by this? What was your opinion of her appointment?

A Dr Inkster had chaired the IMTs since HPS first became involved in 2018.I attended for the IMT on time on 23rd August 2019 and had to wait outside the meeting room alongside some clinical staff, Dr Inkster and other regular members of the IMT, whilst a "pre meet" was being held by "senior membersof GGC". We were not allowed to enter the meeting room for a lengthy period. The meeting started considerably later than planned and, from the start, was chaired by Dr Crighton. Introductions were made but there was no explanation why the chair waschanged, even though Dr Inkster was present. It was when introducing herself that Dr Crighton advised she was the chair of the IMT. I sat beside Professor Gibsonat this meeting, and we quietly shared our confusion over Dr Inkster's position and a new chairperson. Dr Gibson sought clarity on why Dr Inkster was not chairing the meeting. I can't specifically recall the response; however, I do recall there was no clear rationale given for the change and it did feel very awkward and uncomfortable. I asked for this to be recorded in the minutes and that if it could be noted whether due process and governance had been followed. Sandra Devine advised me that this change had been discussed and agreed with Professor Reilly, HPS. The meeting felt incredibly uncomfortable. Following the meeting I sought clarity on the discussions with Professor Reilly and was advised that contact had been made via email by the GGC director of nursing on 20th August to say she was "*in a meeting to discuss IMTs and if it's not an ICD who should/could it be?"*. The question therefore was about whether it was acceptable for a CPHM to chair an IMT if it wasn't an ICD. It was not about the specifics of this IMT or change of chair, it was more a general ask on whether it was acceptable fora CPHM to chair an IMT.

After every IMT I produced a summary email update for the HAI policy unit. Within the update from this meeting, I made factual reference to the chair being changed from Dr Inkster to Dr Crighton *"NHSGGC have replaced the IMT chair*

from the Lead ICD to NHSGGC deputy director of public health". Previously any comments on these updates were on factual accuracy regarding case numbers or control measures, however, on this occasion, the associate director of nursing IPC responded via email "*Chairagreed to be replaced in order for her to have time to review incident, resultsand actions. Other ICDs on the site were asked to chair and declined. National guidance confirms that it is appropriate for a CPHM to chair an IMT* to which my email response was "*Thanks for the clarification, Sandra. The reference to the chair was a factual statement made for information. The rationale and discussion relating to the decision for replacing the chair is a matter for the minutes to reflect today's discussion"* Dr Inkster responded byemail "*The chair did not agree to be replaced to review the incident, results, actions. The chair was asked to demit due to feedback from everyone at the last IMT that the meeting was difficult. This however was not corroborated at the IMT today by senior clinicians, HPS or the microbiologists who were present*".

I would agree that the meeting referredto was difficult, however it was others who made it difficult and not Dr Inkster, I would have said that if anything, Dr Inkster chaired this difficult meeting well and remained patient and risk focussed throughout. I was not asked about this meeting and given the clinical team's surprise at the change of chair I do not believe they had been asked. Irrespective of the reason for the change in chair it felt very disrespectful for the outgoing chair not to be acknowledged or thanked at the start the meeting and no explanation or rational volunteered. Thereafter the meetings (IMTs)appeared to have a shift in focus, with an aim to prove the hypothesis incorrect and promote a conclusion to the incident with an acceptance of cases being a normal rate. An example of this is the chilled beams: despite positive microbiology reported at the IMT on the 14th August 2019, there was a change towards removing chilled beams as a hypothesis and despite the microbiological view (until 23rd August 2019) that there was an increase in numbers and unusual types of micro-organisms, there was more of a drive to accept that this was a normal background rate in both number and type. On the 18th of September 2 microbiologists stated at the IMT that ward 6A was microbiologically safe. Both my colleague (Lisa Ritchie) and I did not support this view. The meetings

continued to be difficult and following discussion with my colleague Lisa Ritchie (who had attended some of the recent IMTs whilst I was on leave) we agreed that it was not in our best interest to attend these meetings alone and thereafter, where possible, HPS was represented by 2 nurse consultants. This was a situation I have never found myself to be in throughout my time at HPS. In addition, IMT notes/minutes became more challenging. Often the minutes were issued late/close to the meeting, contained either inaccuracies or items discussed not appearing on the minutes. This resulted in extensive comments from ARHAI and others which took a lot of time at the start of each IMT. ARHAI requested the meetings were recorded, however GGC advised this was not something they could facilitate. At times there was disagreement with HPS recollection of discussions and some GGC members on the IMT. This was an additional reason that Lisa Ritchie and I agreed that, where possible, HPS would be represented by 2 consultants. I also recall there were occasions when finalised minutes or minutes with the requested changes were not issued, with HPS requesting on the 8th October that final minutes were circulated. Meeting start times also changed to later in the day, which often resulted in meetings going beyond 7pm and staff often having to leave before the meeting was finished.

52 Dr Inkster resigned in August 2019. What do you understand to be her reasons fordoing so?

A Dr Inkster advised HPS by email that she had resigned as lead ICD NHSGGC and took the opportunity to thank HPS Staff for their support.

Whilst I was saddened to hear this, I was not at all surprised as it was becoming more evident that Dr Inkster's position appeared to be becoming untenable. Her views and approach were becoming more frequently challenged, particularly within the IMTs, by other GGC colleagues. There was also disagreement over the reasoning for the sudden replacement of Dr Inkster as IMT chair and a clear and open lack of respect shown to Dr Inkster at that time.

53 Meeting with Teresa Inkster and Prof Leonard. In her statement Teresa Inkster describes a meeting with Professor Leonard around the time ofher resignation in which the risk from drains was discussed. We understand that you were present.

a) What was the outcome of this meeting? Were any control measures suggested and implemented?

A This meeting was relatively informal and held at the request of Professor Leonard, to understand the routes of transmission to patients, particularly from drains. It took place in a coffee shop on the QEUH. Dr Inkster led the discussion on biofilm creep, splash risk and the challenges being faced due to the point of use filters applied reducing the space between the outlet and the sink, resulting in significantly more splash. This additional splash had previously been observed on several occasions by HPS. The current approach of drain decontamination was discussed, and it was agreed at that time that this was a good approach. The outcome from this meeting was a better and shared understanding relating to the potential routes of transmission and risks beingposed by the drains.

b) Was there consensus as to the risk occasioned by drains?

A There was good discussion led by Dr Inkster, and I don't recall any opposing views between Prof Leanord, Dr Inkster or me to those described above, and I believe we left the meeting with a shared understanding and agreement of the risks and potential routes of transmission from the drains.

c) Can you comment on the success or otherwise of any control measures implemented?

A There was agreement that the control measures were appropriate, albeit they required to be monitored. The control measures in place at that time were mainly regular drain disinfection. It is difficult to comment on the success of the control measures as the IMT focus started to move from considering the hospital environment as a source, with a focus on the external environment.

HAIs in 2020

54

a**)** You attended only 1 IMT in 2020, in July 2020. Can you respond to questions a-k inpara 30 above? (**Bundle 1- IMT Minutes**)

A There was a single meeting of an IMT held by GGC on 2nd July 2020, which I attended remotely. This IMT was held to discuss a positive cryptococcus result, which was deemed to be a false positive. HIIAT was green and no further meetings were held.

b) Were you aware of any other issues in QEUH at this time (other than dealt with in question R below)

A There were a number of incidents reported to ARHAI in 2020 (excluding those with no potential environmental link): Most were reported as HIIAT green and therefore ARHAI have limited detail: -

- 17/3/20 Vancomycin resistant enterococci: ward 6A
- 9/4/2020: Ward 6a: Blood stream infections: gram negative organisms (Klebsiella pneumonia, Enterobacter cloacae HIIAT Green No ARHAI support requested
- 17/4/20: Intensive care unit: Blood stream infection: Enterobacter aerogenes HIIAT Green No ARHAI support requested.
- 18/6/20: Wards 10b, 10D, 11B : blood steam infections : Burkholderia stabilis: potentially linked to a wider national incident
- 18/6/20: NICU and SCBU: Mixed organisms including Stenotrophomonas maltophilia, Acinetobacter baumanii, Serratia marcescens HIIAT Green No ARHAI support requested
- 16/7/20 NICU: Acinetobacter ursingii Blood stream infection. HIIAT Green No ARHAI support requested
- 28/7/20 NICU: Klebsiella oxytoca, Enterobacter cloacae (colonisation) HIIAT Green No ARHAI support requested
- 31/8/20 NICU Serratia marcescens Blood stream infection HIIAT Green No ARHAI support requested
- 10/9/20 PICU Colonisation: Acinetobacter nosocomialis, Enterobacter cloacae

HIIAT Green No ARHAI support requested

- 8/10/20 Ward 4C: Stenotrophomonas maltophilia blood stream infection HIIAT Green No ARHAI support requested
- 15/10/20 NICU Serratia marscescens colonisation HIIAT Green No ARHAI support requested
- 26/10/20 NICU Pseudomonas fluorescens colonisation HIIAT Green No ARHAI support requested
- 9/11/20 PICU Blood stream infection : Pseudomonas aeruginosa, Klebsiella pneumonia HIIAT Green No ARHAI support requested
- 23/11/20 Ward 6a Blood stream infection Serratia marscesens, klebsiella pneumoniae HIIAT Green No ARHAI support requested
- 26/11/20 PICU Respiratory, Klebsiella pneumoniae HIIAT Green No ARHAI support requested
- 15/12/20 PICU Klebsiella pneumoniae, Enterobacter cloacae (colonisation) HIIAT Green No ARHAI support requested

Interactions with the Independent Review, Oversight Board, Case Note Review

55 Can you describe any involvement you had with:

a) The Independent Review

A I was interviewed by the 2 chairs of the independent review. Despite requesting this, Ihave never seen a draft or finalised statement/summary of discussion.

b) The Oversight Board and

A I was not involved with the oversight board.

c) The Case Note Review

A I was not involved with the case note review.

HAIs in 2021 – (Bundle 1 IMT Minutes)

56 For each IMT you attended can you respond to the question a-k in para 13 above

A Having reviewed the minutes from this meeting I note that a cluster of *Serratia marscesens* colonisation and blood stream infections were reported within NICU on 30th April 2021 and an IMT held. The minutes from this meeting do not consider an environmental link as the hypothesis. At the third IMT, I raised the point that the new case may suggest an additional hypothesis of an environmental source and perhaps not the original person to person cause that was being explored. The hypothesis was altered to an unidentified source in the unit and possible environment to patient or patient to patient transmission. In total 6 IMTs were held and there were 8 confirmed cases of *Serratia marcescens* and 1 possible case. Environmetal sampling was undertaken looking for gram negative bacteria. It was reported that no gram-negative organisms were isolated from samples taken from the sinks or close to the sinks, apart from a shelf above a sink which was found to have Pseudomonas. A number of samples from the direct patient environment (cots and around the cots) were reported as isolating Serratia marcescens. All taps were replaced with Markwik thermostatic mixing taps, IPS panels were replaced and internal IPS panelling with wet wall and sealed completely. Point of use filters were also in place.

AN IMT was held on 5th August to discuss 3-gram negative blood stream infections in patients in ward 6a. The organisms were Enterobacter cloacae and Klebsiella pneumoniae. The first hypothesis was that all 3 cases had an underlying clinical issue, suggestive of an endogenous source. The 2nd hypothesis was environmental, although the minutes note this as being unlikely as there was no evidence of an environmental source. It was reported that water was tested every 4 weeks and neither of the organisms isolated from the patients were isolated from the water. Point of use filters were in place. This was assessed as HIIAT green. No prophylaxis was given to patients, control measures included: enhanced supervision carried out 4 weekly, root cause

analysis undertaken with a clinician for every gram-negative blood stream infection, point of use filters remain on taps, routine drain decontamination. Environmental swabbing showed no presence of gram-negative bacteria.

HAI Reporting – overview of procedure and practice

Can you describe:

57 The procedure for monitoring and reporting HAIs within NHS GGC and escalation to HPS and the Scottish Government.

A I am unable to comment on the GGC procedure for monitoring or reporting HAIs as I am unaware of the current agreed board processes.

56 The practical operation of the system within the QEUH, including:

a) barriers to reporting HAIs.

b) data collection for different types of infections – fungal, gram negative,gram positive, other; and

c) the use of data sets for infections

A I am unable to comment on points 1-3 as I am unaware of NHSGGC internal processes.

57. The relationship between HPS and the SG HAI Policy Unit, especially what level of oversight there is in practice. Also, what does the oversight look like- formal or informal, meetings, emails or phone calls etc?

A ARHAI has a formal working arrangement with the policy unit, which includes reporting of incidents/outbreaks in line with chapter 3NIPCM and oversight of the ARHAI programmes. Oversight/discussions take place at meetings, by emails or by phone calls. The HAIPU attend ARHAI senior management team meetings every second month to discuss progress on each ARHAI clinical priority programme. ARHAI inform the HAIPU of any incident reported that has been assessed as HIIAT amber, red. ARHAI also assess HIIAT greens and if considered politically sensitive or something that would be anticipated to attract media attention would also be reported to HAIPU. ARHAI also produce a weekly incident and outbreak summary report that is shared on a Friday with the HAIPU.

58 What is your opinion on the adequacy of the system?

A This is very dependent on the cabinet secretary and civil servants/advisors in post at that time. This is driven by the cabinet secretary's interest in the particular area and associated political and media interest. Ms Freeman expressed significant interest in HAI and, as a result, there was a greater engagement over incidents. This had not been seen with her predecessor or successor. During the 2018/2019 water incident at the QEUH/RHC there was significant contact between HPS and SG, including providing updates and responding to cabinet secretary questions.

59 How might it be improved?

A In relation to the QEUH/RHC water incident in 2018/19, communications between HPS and the HAIPU were good. Without a change in remit or role expansion for HPS/ARHAI I'm unsure how this could be improved. However, clarity and strengthening the roles and responsibilities for ARHAI would be helpful, with an agreed standardisation in approach to incident assessment, monitoring and reporting.

CURRENT SITUATION

60 We understand that you are still involved in Infection Control at QEUH. How are things at QEUH now as compared to the period under investigation? Are you now seeingfewer BSIs, fewer unusual infections and /or fewer samples with multiple infections?

A I have not been employed by NHSGGC since 2009 and cannot comment on the BSIs being reported internally within GGC. However, since the repatriation of the children back to the refurbished wards 2a/b in 2022, there have been significantly less incidents reported from wards 2A/B. Relationships between ARHAI and some members of the GGC IPCT have remained challenging, to the extent that the clinical team within ARHAI raised this with the lead consultant (ARHAI). There was constant challenge from some members of the IPCT (GGC) whenever clarity was sought or requests for any further information were made. On the 17th March 2023 the senior nurses wrote to the nurse consultants and

clinical lead (ARHAI) expressing concern that “communication and dealings with NHS Greater Glasgow and Clyde are becoming increasingly strained and resource intensive” Examples were included within this email, which concluded with “*As IPCNs we are trained to investigate complex situations, this includes where we are not party to decisions being made and where the information is not clear or explicit. NHS GG&C, the biggest board, do have complex incidents. As ARHAI Scotland are not frequently invited to attend, we are not privy to the in-depth conversations happening during the IMTs and we are not receiving this level of information through the ORT consistently. We have these discussions easily with other boards but find that concerns about NHS GG&C often lead to extensive meetings with Nurse Consultant colleagues and, occasionally, ARHAI Scotland ICD to ensure any queries cannot be misunderstood, deemed as unnecessary by the board or questioning the ability of the board’s IPCT. My observation is that we get the most “push-back” from one individual within the board and would suggest that this is a communication issue or lack of understanding of how and why we are looking for information to be submitted and in what level of detail. As the chair of the IMTs they may be best placed to complete the ORT to ensure we have all the available information in the detail that is required? I would suggest that this could be resolved through open, honest and supportive discussion to enable us all to remain committed to keeping our patients and colleagues safe while providing the necessary communication with our stakeholders*”.

The concerns raised by the senior nurses were supported by the nurse consultants and this was discussed at a clinical meeting. It was agreed to be progressed via the ARHAI clinical lead. This is now addressed via the clinical lead (ARHAI), who meets with the Director of IPC (GGC) on a weekly basis. The clinical lead (ARHAI) does not meet with any other board on a regular basis, and communications being directed via the lead consultant (ARHAI) does not happen with any other board.

61 Do you have any ongoing concerns as to the safety of the QEUH? If so, what are they?

A I don't believe I am in a position to offer an informed response to this question. My response to this question can only be based on what HIIAT is assessed and also reported to ARHAI, and this may not be a true representation of positive results/testing. However there has been a significant reduction of reporting of infections with environmental organisms to ARHAI since 2020. In September 2023 one of my consultant colleagues contacted the ARHAI clinical lead to express concern over reporting from NHSGGC. These concerns included "*NHS Boards are required to report incident and outbreaks to ARHAI Scotland in accordance with Chapter 3 of the NIPCM, Outbreak Reporting Protocol and Appendix 13 (https://www.sehd.scot.nhs.uk/dl/DL(2019)23.pdf). There is a pattern where the Board have not reported single cases in line with Appendix 13 and/or there has been delayed reporting (e.g., not within 24 hours of HIIAT assessment). The delay has varied from days to weeks/months.*

There have also been issues identified with case definitions, where the scope of the case definition does not fully align with, or is reflective of the incident, meaning cases could potentially be missed".

"*There appears to be an over-reliance on the use of WGS for incident and outbreak investigations, where GGC are utilising results as part of an assessment to advise that cases are 'not linked'. We have previously highlighted that WGS should be used as an aide as part of investigations but should not be the sole factor for decision-making*".

"*In addition to the issues identified in relation to WGS, there is a related issue with the use of typing (or WGS) to rule out an outbreak/incident when incidents relating to water may result in multiple strains of the same organism (or multiple different organisms). Relying solely on WGS or typing to rule out an outbreak/incident with a potential water source may provide false reassurance.*"

I was off work at the time these concerns were raised, however I understand that this was discussed internally and the ARHAI clinical lead raised this with the

NSS director and director of nursing.

Observations

62 Having set out the factual position in relation to these matters above, do you have anyreflections on what went wrong and why at the QEUH, in particular in relation to:

a) the design stage and NHS design guidance.
b) commissioning and validation.
c) failures in reporting lines.
d) organisational and leadership failures.
e) cultural issues.
f) the ability of staff to raise concerns without fear of repercussion.
g) governance of estates and facilities
h) HAI monitoring and reporting.
i) other concerns?

A I am limited in the reflections I can offer as someone external to NHSGGC and not in receipt of all information. However, it is my opinion that there appear to be 2 components: -

Firstly: prior to patient occupation: there appears to be a lack of clarity in IPC involvement, responsibility and decision making in derogations, commissioning, handover and ongoing maintenance.

As a result, it is difficult to offer an opinion on whether the IPC oversight, risk assessment and input was acceptable. IPC should always be involved in commission and handover and have oversight and review ofany results, to assist in providing assurance of a safe environment.

Secondly: The identification, management and approach to what emerged as a significant incident and the ongoing management.

My involvement in ward 4b/BMT was purely in an advisory capacity, providing best practice and approach towards risk mitigation, in an area which was not

included in the original design specification and therefore not purpose built, to allow the repatriation of patients and ongoing function of a specialistunit.

My involvement in the IMTs commencing March 2018 until late 2019 was extensive and continuous, and I witnessed and experienced some challenging behaviours during this time, examples of which have been covered in earlier answers relating to IMTs. From mid/late 2019 there was a developing lack of acceptance/acknowledgment that there was an issue, with a push towards what felt like a “nothing to see here” approach. From a HAI monitoring and approach perspective, ARHAI Scotland can only be aware of those incidents that NHSGGC reports to ARHAI, so I am unable to comment on HAI monitoring and reporting at QEUH/RHC level. However, I believe I have captured a summary of these concerns in my response to the questions above.

PART 2- REPORTS Bundle 6- Reports by HPS, HFS and ARHAI)

In addition to the SBARs of 2015 and 2017, you authored or coauthored the following reports:

1 HPS NSS initial report on findings of water contamination and recommendationsQEUH/RHC May 2018 Final Report

2 HPS Report Water Contamination Summary of Incident and Findings - December2018

3 HPS draft Report GGC Situational Assessment RHC Wards 2a 2b - 5 June 2019

4 HPS Review of NHS GGC Paediatric Haematology Oncology Data - publishedversion (redacted) 29 November 2019

5 NHS Scotland National Water Survey Report Final June 2022

6 ARHAI - Scotland's Approach to Microbiological Water Testing Final July

63 For EACH REPORT can you advise

a) How did the report come about? Is it a requirement when the National Framework is triggered? If so, what are the requirements/ specification for the report?

b) If not, was it commissioned, and if so, by whom?

c) What were its Terms of Reference? What precisely was the paper aiming to study orestablish? Were you given the precise terms of reference, or did you have some leeway?

d) Did you work alone or part of a team? If a team, who did what?

e) To whom was the finalised report sent? Do you know what the report was used for byGGC?

1 *HPS NSS initial report on findings of water contamination and recommendationsQEUH/RHC May 2018 Final Report (Bundle* **6 page 3)**

2 *HPS Report Water Contamination Summary of Incident and Findings - December2018 (***Bundle 6 page 32)**

3 *HPS draft Report GGC Situational Assessment RHC Wards 2a 2b - 5 June 2019 (Bundle* **6 page 194)**

A NHSGGC requested support from ARHAI in March 2018 for a water contamination incident, with potentially linked clinical cases. This support requested was initially in the form of IMT attendance, however Scottish Government invoked the national framework on 20th March 2018. This normally requires ARHAI to provide a situational assessment within 5 days and a final SBAR summary report, however, given the complexities, extent and nature of the incident, ARHAI undertook to produce a more detailed report on the incident, investigations and findings. This resulted in the production of report 1.

Report 1 - advised of a detailed technical report being produced for NHSGGC by 31st July 2018. It was originally envisaged that this report would be a joint ARHAI/HFS (merged clinical and technical) report, however it quickly emerged that the clinical aspect was at risk of becoming lost in such a specialised detailed technical report and ARHAI/HFS agreed after attempting a first draft joint report, that this would become 2 separate reports.

The ARHAI report was published in December 2018 (report 2). The HFS report was then intended for GGC only and not published. I was the lead author of both of these reports; however, I had support from the ARHAI data and intelligence team.

Report 3 - the GGC situational assessment was also commissioned via Scottish Government, invoking the national framework. I was the lead author on this report, supported by the data and Intelligence team/clinical lead ARHAI.

All 3 reports were submitted to NHSGGC for factual accuracy prior to being finalised and issued to Scottish Government and NHSGGC.

4 Report 4 - HPS Review of NHS GGC Paediatric Haematology Oncology Data - publishedversion (redacted) 29 November 2019 (**Bundle 6 page 250)**

A This is better answered by the data and intelligence team/ARHAI clinical lead.

5 Report 5 - NHS Scotland National Water Survey Report Final June 2022 (**Bundle 5 page 206)**

This report was undertaken in response to a recommendation made in report 1: which states that ARHAI will undertake a review of NHS current approach to water safety. This was undertaken via a questionnaire issued to each board relating to microbiological water testing. A summary report was produced for each board which identified their own board and anonymised other boards: this allowed comparison with other boards. A full report with all identifiers was issued to Scottish Government.

6 Report 6 - ARHAI - Scotland's Approach to Microbiological Water Testing Final July

This appears to be an appendix of report 5 rather than a stand-alone report.

Epidemiology reports

DATA AND METHODOLOGY

64 Your samples were taken from ECOSS. Did you consider other sources, such as CLABSIandLIMS (which were considered in Report number 3 above). If so, why were these excluded?

A I would like to defer a response to this question to those from ARHAI data and intelligence team/ clinical lead who were more closely involved in this aspect.

65 You included fungal infections in your data sets. By contrast, these were excluded from the2019 report since “it could not be established if all positive fungi blood cultures were being processed through ECOSS.” Can you comment on this?

A I would like to defer a response to this question to those from ARHAI data and intelligence team/ clinical lead who were more closely involved in this aspect.

66 Use of SPC charts- what are the limitations of their use, and how does this affect the results?

A I would like to defer a more detailed response to this question to those from ARHAI data and intelligence team/ clinical lead who were more closely involved in this aspect. However, SPCS may not be sensitive enough to pick up trends in real time and may offer inappropriate assurance without an accurate ascertainment of an appropriate baseline.

67 You used the paediatric hospitals in Aberdeen and Edinburgh as comparators. Were any other comparators considered?

A I would like to defer a response to this question to those from ARHAI data and intelligence team/ clinical lead who were more closely involved in this aspect.

68 You note that differences in the patient population may introduce bias. Can you elaborate?Are socioeconomic factors relevant?

A I would like to defer a response to this question to those from ARHAI data and intelligence team/ clinical lead who were more closely involved in this aspect.

69 You note that; ***In summary, the overall incidence of Gram-negative, Gram-positive and environmentalbacteria blood cultures increased in the 2A/2B Group after the move to the RHC. In the RHC Other Group, the incidence of Gram-negative bacteria and fungal blood culture didnot change, and the incidence of Gram-positive and environmental bacteria blood culturesincreased***. What are the possible reasons for this?

A I would like to defer a response to this question to those from ARHAI data and intelligence team/ clinical lead who were more closely involved in this aspect.

70 You note that polymicrobial episodes were common, especially where environmental bacteria are concerned, and that this can be associated with younger patients and central venouscatheters. However, both Dr Harvey-Wood and Dr Murphy considered that the incidence of polymicrobial samples were out with what would normally be expected. Do you agree ordisagree? If so, why?

A I would like to defer a response to this question to those from ARHAI data and intelligence team/ clinical lead who were more closely involved in this aspect.

71 You further note that, compared to other hospitals, the QEUH had higher levels of environmental and fungal infections but that gram positives were lower compared to other hospitals. It has been argued by some witnesses that increased line care has led to a decreasedrate in gram-negative bacteria and this accounts for the (real or perceived) with other institutions. To what extent do you agree/ disagree?

A I would like to defer a response to this question to those from ARHAI data and intelligence team/ clinical lead who were more closely involved in this aspect.

Difficulties accessing information and data sharing.

72 The Case Note Review, Independent Review and the Oversight Board reports all comment on inadequate data collection and sharing within GGC Did you experience this?

A I would like to defer a response to this question to those from ARHAI data and intelligence team/ clinical lead who were more closely involved in this aspect.

73 What was the nature of these difficulties? In particular did you experience:

a. Data noted with no location or date.

A I would like to defer a response to this question to those from ARHAI data and intelligence team/ clinical lead who were more closely involved in this aspect.

b. Limited organisms being tested for?

A I would like to defer a response to this question to those from ARHAI data and intelligence team/ clinical lead who were more closely involved in this aspect.

c. Inconsistent recording of data – e.g., IMT minutes not matching sample; information on one system not matching another system

A I would like to defer a response to this question to those from ARHAI data and intelligence team/ clinical lead who were more closely involved in this aspect.

74 Re bacterial typing in particular, some commented that information had to be collated from several different systems and the numbers of environmental samples were limited and lacking in location information as well as comparisonswith other microorganisms. Not enough bacterial isolates were included. There was no database recording all typing data.

a) What do you believe was the basis/cause of these issues?

A I would like to defer a response to this question to those from ARHAI data and intelligence team/ clinical lead who were more closely involved in this aspect.

b) Did this impact on the preparation of your report? In what way?

A I would like to defer a response to this question to those from ARHAI data and intelligence team/ clinical lead who were more closely involved in this aspect.

75 The Case Note Review in particular (pg. 7) was critical of the fact that there was no electronic database for typing results. One of their recommendations was to develop a "comprehensive and searchable database that allows details of microbiology reference laboratory reports to be compared between samples of the same bacteria obtained from different patients or environmental sites." Can you comment as to whether this now been achieved?

A I would like to defer a response to this question to those from ARHAI data and intelligence team/ clinical lead who were more closely involved in this aspect.

Infection rates

According to many witnesses, infection rates at QEUH were unusual both in frequency and type. However, it is acknowledged that it was difficult to measure empirically as there was no data readily available for many of the (rarer) organisms.

76 Do you consider that there were more bloodstream/ patient infections than normal?

A During the period of 2016-2021, HPS/ARHAI received reports of a significantly higher number of cases of gram-negative blood stream infections, particularly in RHC and Schiehallion, compared to those reported before 2016, and compared to those being reported from any other healthcare premise across NHS Scotland. Therefore, I would consider there to be significantly more BSI than *normal* during this period.

77 more unusual **bloodstream** infections?

A The organisms being reported were often unusual, many of which I had never dealt with before, nor had they ever been reported to HPS/ARHAI before. Not only were they individually unusual but to have so many uncommon organisms being reported from the same/similar patient cohort within the same healthcare premise within the same time frame span made this even more unusual.

Whole Genome Sequencing and Typing

78

a) Can you comment on what typing was conducted within GGC during the period inquestions, by which we mean the opening of the hospital in 2015 up to the end of 2019. Didit increase during this period?

A I am not in a position to comment on this as I don't have access to the typing requested by NHSGGC.

b) Has it increased since 2020?

A I am not in a position to comment on this as I don't have access to the typing requested by NHSGGC.

c) Some witnesses take the view that while typing can be used to confirm a link, an absenceof typing cannot be seen to exclude a link. To what extent do you agree/ disagree?

A I agree with this statement. I believe in the position that, with regards to environmental sampling, in particular related to water, that typing should be utilised to include and not exclude. Therefore, this means that the absence of an exact match does not mean the environmental source can be excluded. Environmental typing, particularly related to water sampling, can be very complex and require a significant number of samples to obtain an acceptable representation of the microbial flora. I understand that at least 30 different isolates from each culture plate are required to be confident that a particular strain was not being missed. The presence of biofilms in water systems can complicate the use of typing when trying to exclude links between organisms

in water and clinical samples, and further complicated if the system has undergone chemical disinfection.

d) The CNR took the view that, even in the absence of typing, it is possible, taking all the evidence as a whole, to identify a “probable” link. To what extent do you agree / disagree?Why?

A I agree with the statement made by the CNR. Typing should not be relied upon in waterborne incidents, particularly when the typing does not match for the reasons I have detailed in point c above. It is also more difficult to exclude such unusual infections with a time/place and person link on the basis of typing.

79 As you will be aware, the CNR concluded that the vast majority if the cases they studied were either possibly or probably linked to the hospital environment.

a. In **very generalterms** do you agree or disagree with their findings?

A The incidents covered by this inquiry all have a potential environmental link, and I have not seen evidence during the incident or presented since, that excludes the environment as a possible cause in all or most cases. On reading the CNR I felt it was a robust report and have no reason to doubt the conclusions made by the authors.

b) Do you consider yourself qualified to comment on the link between potential defectsin the built environment and infections in patients?

A I have gained extensive knowledge, skill, and experience in Infection Prevention & Control in the Built Environment. I have supported a significant number of incidents across NHS Scotland since joining HPS/ARHAI in 2009, many of which are considered environmental in nature. This expertise has typically been acquired through a combination of formal education, practical experience, and continuous learning. I am frequently approached for advice, consultation, and contributions to academic, professional, and clinical support/advice. I therefore do consider I am qualified to comment, however, I also recognise my area of remit/expertise and acknowledge that I am unable to comment on technical engineering components.

Appendix B

DOCUMENTS TO BE PUT TO WITNESS

ANNETTE RANKIN BUNDLE:

- Bundle 1- IMT MINUTES A42909010
- Bundle 2 PAG MINUTES A 42907101
- Bundle 3 NHS NSS SBAR A43273121
- Bundle 4 NHS GGC SBAR 4A2959603
- Bundle 9 CRYPTOCOCCUS SUBGROUP A45379981
- Bundle 10 WATER TECHNICAL GROUP A471411680
- Bundle 7 REPORTS PREPARED BY HPS, HFS and ARHAI A439099077

Scottish Hospitals Inquiry

Statement of Dr Penelope Redding MBBS MRCS LRCP FRCPath

Glossary/Acronyms

AICC	Acute Infection Control Committee
BMA	British Medical Association
BMS	Biomedical Scientists
BMT	Bone Marrow Transplant
The Board	NHS Greater Glasgow and Clyde Health Board
CF	Cystic Fibrosis
CVC	Central Venous Catheter
GMC	General Medical Council
HAI	Healthcare Acquired Infection
HAI SCRIBE	Healthcare Associated Infection: Systems for Controlling Risk in the Built Environment
HEPA	High Efficiency Particulate Air
HIS	Healthcare Improvement Scotland
HPS	Health Protection Scotland
HR	Human Resources
IC	Infection Control
ICD	Infection Control Doctor
ICM	Infection Control Manager
ICN	Infection Control Nurse
ICU	Intensive Care Unit
ID	Infectious Diseases
IPC	Infection Prevention and Control
IPCT	Infection Prevention and Control Team
MERS	Middle Eastern Respiratory Virus
MDDUS	Medical and Dental Defence Union of Scotland
NICU	Neonatal Intensive Care Unit
NIPCM	National Infection Prevention and Control Manual
OD	Organisational Development
PICU	Paediatric Intensive Care Unit

PVC	Peripheral Venous Catheter
QEUH	Queen Elizabeth University Hospital, Glasgow
RHCG	Royal Hospital for Children Glasgow
SBAR	Situation Background Assessment Recommendation
SGH	Southern General Hospital
SGUT	South Glasgow University Trust
SHFN	Scottish Health Facilities Notes
SHTM	Scottish Health Technical Memorandum
SMT	Senior Management Team
SOP	Standard Operating Procedure
TB	Tuberculosis

Personal and Professional Information

Introduction

1. I am Dr Penelope Redding. I am 73 years old. I qualified as a doctor in 1974. I retired in 2018.

2. I worked as a Consultant Microbiologist and ICD. I worked in the South of Glasgow from 1984 until my retirement. When the Board was formed in 2006 it became my employer. Before that I was employed by its various predecessor organisations. I was based at the QEUH from its opening until my retirement.

3. I have prepared this statement to assist the Inquiry. I have attempted to err on the side of brevity, but I would be pleased to provide any further detail or input that the Inquiry wishes to have on any of the matters contained within this statement.

4. Some of the events detailed in this statement happened a long time ago. As I have been retired for some time, I do not have access to all of the necessary work emails and other papers to allow me to check dates. I am therefore reliant on my recollection. It is possible therefore that some dates may be inaccurate although I have done my best to ensure that this statement records events as accurately as possible.

Qualifications

5. I studied Medicine from 1969 to 1974 at University College London and Westminster Hospital Medical School, both of which are part of the University of London. Thereafter, I worked as a Junior House Officer for a year, spending 6 months in gynaecology and six months in medicine. Thereafter, I worked as a Senior House Officer for a further year, rotating through haematology, blood transfusion, microbiology and pathology. My Junior House Officer and Senior House Officer years

were both at hospitals linked to the Westminster Hospital, London. I then worked as a Junior Lecturer in Microbiology at St Thomas' Hospital for 9 months before moving to Glasgow in 1977 to take up a post as a Microbiology registrar, to follow my husband when he was appointed to a job in Scotland. I was a registrar and then a senior registrar at the Western Infirmary in Glasgow until 1984.

6. I had my first child in 1979 and I worked part time when I returned after maternity leave. I resumed full time work when I became a consultant in 1984. In 1987, I had my second child. I returned to work full time after maternity leave and, thereafter, I was a Consultant Microbiologist for the remainder of my career.

7. My qualifications are MRCS, LRCP, MBBS, and FRCPath. I have provided a CV to the Inquiry.

Overview of Professional Experience

8. I became a Consultant Microbiologist in 1984, based at the Victoria Infirmary, Glasgow. My duties included providing what would now be described as ICD cover. I remained in that role until 2008 when the Microbiology department at the Victoria Infirmary merged with the Microbiology department at the Southern General and I went to work there, also as a Consultant Microbiologist.

9. When I became a Consultant Microbiologist in 1984, IPC was not yet recognised as a standalone service anywhere in Scotland and was developing in England. Microbiologists did all of what is now referred to as IPC work and managed any outbreaks. There were no ICNs at this point to support our work.

Work History – 1990 to 2000

10. In around 1990, I was appointed as Head of Microbiology for the Southeast Glasgow area. This role included serving as what would now be known as an ICD.

11. By around 1991, what would now be referred to as the IPCT, but was then just referred to as “infection control” for Southeast Glasgow, consisted of me doing the job that would now be described as ICD working alongside a single ICN. I don’t believe that the role of ICD had been formalised at that stage. A microbiologist performing infection control duties acting alongside an ICN was the entire infection control team at that point and we worked very closely together as a team, albeit a small one.

12. The then ICN (Maggie McCowan) and I wrote the first IPC policy manual for the local area in around 1991/1992, which was distributed across the Southeast Glasgow hospitals. To ensure that the policy was followed we built good working relationships with all the relevant directorates, including Estates/Facilities, and management as well as clinicians.

13. In approximately 1996, I was appointed as Clinical Director for the Victoria Infirmary Laboratory Directorate. This was a senior management role and included responsibility for the whole Southeast Glasgow Laboratory Directorate. My responsibilities included managing and delivering a quality clinical laboratory service (serving Biochemistry, Haematology/Blood Transfusion, Microbiology, and Pathology), which met the needs of the clinical services in the hospitals we served and in general practice. In this role the Heads of Haematology, Biochemistry and Pathology would report to me professionally (there were separate reporting lines for their management rather than clinical roles). I was also still the Head of Microbiology at this point.

14. Being the Clinical Director made no difference to my Microbiology and infection control responsibilities which continued. The role of the IPCT was developing and more ICNs were appointed over the coming years as the ICN role became more established and accepted.

Work History – 2000 to 2010

15. I resigned from my role as Clinical Director in around 2001 because of problems which had partly been caused by the merger of the Victoria Infirmary and SGH Trusts and discussion about shutting down and rationalising the Victoria Infirmary laboratories to the SGH. The plan was that there would no longer be on site Microbiology. In my view, that meant we were not providing the same level of service. My colleagues and I had raised concerns about this, but they had not been accurately recorded. Meetings would be held but our concerns would not be minuted. I recall writing down a note of my concerns and handing it to a minute taker to try and make sure what I was saying was actually recorded. In the circumstances, I was not prepared to continue in my role as Clinical Director.

16. After resigning as Clinical Director, I continued as a Consultant Microbiologist and ICD for SGUT until March 2008, when I was appointed Clinical Director for GGC's Laboratories Directorate. At some point, I stopped being Head of Microbiology; I cannot recall when. In 2008, the Victoria Infirmary Laboratory closed and moved to the SGH site. This resulted in challenges in delivering the Clinical Microbiology service to southeast Glasgow.

17. GGC's laboratory directorate was, and still is, one of the largest in the UK, with a budget of around £100 million at that time. When I took over, I was personally responsible for all of the laboratories (over 30 at that point). We then underwent an extensive centralisation programme with rationalisation of services.

18. By this point, I was also covering the whole of SGUT as an ICD, although I think there might also have been ICD cover within the SGH. There were also about six ICNs and the service was continuing to develop. After I was appointed Clinical Director, I continued to work as Lead ICD for SGUT until around August 2008. At that point, Professor Williams was appointed to what was then the new post of "Lead ICD" for GGC.

19. Thereafter, I did not do any formal ICD work as I did not have the capacity. Tom Walsh, who had been appointed as the ICM at around about the time I was appointed as Clinical Director in 2008 had asked me if I would be interested in the Lead ICD role, but I declined, and Professor Williams was appointed. I did not feel I could carry on being Clinical Director and have an ICD role as part of my Microbiology duties and also be Lead ICD for GGC. I really enjoyed infection control work and I didn't want to give it up.

20. Structural changes were made in the aftermath of the Vale of Leven report. The IPCT structure was put into place at that point and the managerial function was removed from the laboratory directorate and I believe it was given to the ICM and the lead ICN. In my view, these changes were the start of the fundamental problems within infection control in Glasgow. I can provide further detail about this if that would assist the Inquiry. Dr Brian Cowan, Medical Director at the time of the Vale of Leven Inquiry, said in his statement to the Vale of Leven Inquiry that he believed the problems would not have arisen had myself and Ms Isabel Ferguson, Laboratory Directorate General Manager, had been involved in infection control and still been in the laboratory directorate.

21. I was finding it increasingly hard to work as ICD within the IPCT with Sandra McNamee as Lead ICN. At times, I did not feel that some of the ICNs wanted to work as part of a team. I felt that the ICDs were often only asked to be involved to rubber stamp a course of action that had been decided by the senior ICNs. Sandra McNamee was not open to genuinely collaborating and listening to arguments that did not align with her preferred approach. There were obviously occasions, such as outbreaks, when the ICDs and ICNs worked together to investigate, manage, and resolve the problem. However, it was sometimes a challenge to get the senior IPCT to accept there might be a problem that needed to be investigated. Sometimes a concern might be raised, and on investigation turn out not to be an issue. Sometimes a concern needs to be fully investigated to understand the problem that needs to be managed appropriately.

The genuine collaboration that had existed between the ICNs and ICDs was being eroded as the ICNs seemed to be increasingly moving towards working autonomously. There is overlapping expertise shared by ICNs and ICDs, but they also have individual training that should be used to work in collaboration as a team. One obvious example is the ability of microbiologists to understand the interpretation of microbiology results that are not "straightforward". This does not mean that the service provided by the hardworking ICNs on a day to day basis was not essential to the provision of routine infection control services.

22. In March 2011, I resigned from the Clinical Director role after careful consideration. The role was very demanding and I was thinking of retiring. As a Clinical Microbiologist, you could find yourself working a very heavy on-call which could include working 11 straight days without a day off, and often being woken up two or three times a night by phone calls asking for advice. Professor Williams took over as both Clinical Director and Lead ICD when I resigned. I think Professor Coia was Head of Microbiology for a while around this time. Thereafter, Professor Williams took over that post as well. In my view, it is not appropriate for a single person to be simultaneously in post as Clinical Director, Lead ICD and Head of Microbiology. There should be independence of thought between these three posts which is obviously very difficult if the same person simultaneously performs all of the roles.

Work History – 2011 to retirement

23. From 2011 to 2014 I continued to provide IPC advice as a Microbiologist, including providing IPC advice out of hours, but I did not have any ICD sessions as part of my job plan.

Appointment of Dr Peters

24. In around 2014 Dr Peters was appointed as a Consultant Microbiologist and ICD.

25. Dr Peters did not want to work full time. We did not do a formal job share but I reduced my sessions from 10 to 4.5, which equated to 2 days per week, with no out of hours commitment, and Dr Peters worked the other 3 days and did the out of hours work. I might have dealt with some IPC issues during this period, but I think I mostly would have passed them to an ICD for South Glasgow to be resolved. I worked very flexibly at this time, and I did extra sessions when required to ensure that the Microbiology service continued to be delivered safely. I also covered out of hours when there was no one else available to cover.

26. Dr Peters was very experienced, both as a Consultant Microbiologist and as an ICD, and she immediately started identifying concerns and reporting them both through the IPCT reporting lines and at consultant meetings.

Timing of First Meeting to Raise Concerns

27. For the reasons set out more fully below, I became very concerned about the safety of patients at the QEUH. I have thought carefully about when I first raised these concerns. I think that the first meeting I had with a Medical Director (David Stewart) and the then Chief Operating Officer (Grant Archibald) to highlight multiple problems with infection control was around about the time when Dr Peters was appointed but before she actually started in her post.

28. I am fairly sure of the timing because I remember saying to them that they were fortunate that Dr Peters had been appointed because I knew she was very experienced. I told them that I thought there was clinical risk arising from the number of inexperienced ICDs who were in post at that point, so I was very pleased that someone experienced had been appointed.

29. The concerns that I raised at this meeting included issues with the ventilation, with air sampling, and with consultant microbiologists and ICDs not being listened to when

raising concerns. I also described the increasing problems with the culture within IPCT. I was raising the concerns that my experienced consultant colleagues were identifying and reporting. I did agree with and understand these concerns.

Last Years in Practice

30. I found that between 2011 and my retirement in 2018 there appeared to be a worsening culture within Microbiology and IPCT of not recording information, being told not to take minutes of meetings, and being told not to send emails on particular incidents. I believe this was to avoid there being a written audit trail of the reporting of any problems at a later stage. This included a direct instruction from both Professor Williams and Professor Jones (who had a poor working relationship with each other) to stop putting things in writing on more than one occasion. I continued to put things in writing and I advised all my colleagues to do the same. I continued to have serious and increasing concerns about patient safety at QEUH and RHCG, and what I felt was the failure of the organisation to deal with concerns which were raised.

31. There was a profound culture of fear and bullying in which people were terrified of speaking up. By way of an example, when our Microbiology trainees produced a document detailing their concerns (after I had told them to put things in writing) a meeting was held which I attended at which I heard Professor Williams say he was going to “destroy their careers”. I reported this to Rachel Green, the Medical Director for Laboratories. As far as I know, nothing was done, as there was no feedback. The document highlighting their concerns is available.

32. I would have retired earlier than I did but I felt that I could not leave things in the state they were in; others were too frightened to speak up. Many of these colleagues were people I had worked with for more than 30 years. People feared for their careers. Based on my experiences with Professor Williams, I thought they were right to be worried. I knew that I was at the end of my career and so there was not much that

could be done to me in practical terms. I spoke to senior managers when others did not.

33. I eventually retired in March 2018.

Background and Introduction to Microbiology and Infection Control

The Role of a Consultant Microbiologist

34. Medical Microbiology is a laboratory-based discipline involved in the diagnosis, treatment, and prevention of the spread of infection in hospitals and in the community. As a Consultant Microbiologist, I worked closely with clinicians on the wards, making a significant contribution to clinical infection management.

35. The duties of a Consultant Microbiologist are considerable and varied. The job requires close working with the BMS and other lab staff, ward clinicians, the IPCT (comprised of ICDs and ICNs), Estates/facilities, management and various other departments in the hospital. Microbiologists ensure the effective and accurate identification, diagnosis, analysis, risk assessment and management of infectious diseases and the prevention of the spread of infection, the effective running of the labs and the appropriate use of antimicrobial treatment.

36. Medical Microbiologists require both clinical skills and laboratory knowledge. Duties typically include a daily visit to the ICU and visits to other wards as required. The laboratory aspects of the role require close working with BMS staff in the Microbiology department.

37. Microbiology analysis of specimens usually requires culture, followed by the identification of organisms and sensitivity testing. It may take 48 hours or more to formally report a result, but at each stage there may be some action that can be taken and advice given on treating a patient to the clinicians on the ward.

38. All Microbiologists generally have IPC as part of their responsibilities, with some having formal ICD sessions/responsibilities. All Microbiologists have out of hours responsibility for IPC and give advice as required even if they do not have ICD sessions included in their job plan. Microbiologists identify infection concerns and ensure that these are reported to the IPCT. Even though they may not be directly involved in the management of incidents or outbreaks, they need to be briefed on what is happening to enable them to alert IPCT of new cases and incidents and to manage any problems out of hours. In serious outbreaks, members of the IPCT may be brought in to the hospital to assist in the management of an outbreak out of hours. This is usually at the weekends when the Consultant Microbiologist on call would otherwise be overwhelmed.

39. IPC must be a pro-active service to minimize the need for a reactive response. It is impossible to eliminate all infection risks to patients, but every effort should be made to reduce the risk of HAIs for the benefit of patients, visitors and staff. Incidents and outbreaks are very resource intensive and protecting these resources by reducing the occurrence of incidents and outbreaks insofar as possible ensures they are available when absolutely needed. The more incidents there are, the greater the resource required. Caring for infected patients creates more work for ward staff. Outbreaks and incidents create more work for the IPCT. It is therefore critically important that the IPCT minimises the number of incidents to prevent services from becoming stretched. There is also a financial cost, and more importantly, a cost to patients.

The Relationship between IPC and Construction/Refurbishment Projects

40. There are standards in place produced for the NHS in Scotland known as SHFN which are intended to provide guidance and advice on how to safely build and maintain/refurbish the hospital estate in Scotland.

41. As detailed throughout these notes, the IPCT should be involved at the planning, building, commissioning, and maintenance stages of any project or refurbishment. During my time at the Victoria Infirmary this was not always the case. For example, I recall an occasion when a toilet was installed within the gastroenterology unit without a wash hand basin. This gives rise to obvious infection risk and resulted in extra costs to rectify, which could have been avoided if they had consulted with IPCT before installation. There were numerous similar examples of things but this one particularly sticks in my mind because it was so obvious. Because of the reoccurrence of incidents like this a pro-forma plan document was created for all projects which required documented consideration of whether any project required IPCT input before proceeding.

42. Building designers can only produce a specification that meets the needs of different patient groups if specialist ward clinicians and IPCT are involved from the outset, so that the requirements can be properly understood. No single professional has all of the knowledge required to ensure the right specification is agreed. It was recognised by GGC that IPCT should be involved in the planning and commissioning of all projects (minor and major) to ensure all standards were met and the needs of each particular group of patients were met. Estates and the IPCT both need to use their individual knowledge and expertise to get this right. Service users should also be consulted.

43. At the early stages of IPC being integrated into hospitals, the involvement of the IPCT was not always welcomed. IPC is often seen by others as a speciality that makes demands and requires unnecessary standards to be met, by putting obstacles in place. There is a tendency to think that involving IPCT will cause delays in signing off the plans and will have cost implications. My experience is that, even if you do have good working relationships, these can become strained when the pressure is on. Lines of communication and respect must be maintained and the ethos of team working promoted.

44. Plans can go wrong or be changed unilaterally during a project and IPCT plays a critical role in identifying any problems that may result from this. IPCT have to be pro-active

and ensure that they are embedded within the team overseeing a project. It is easy to become marginalised but, in my view, it is the duty of IPCT to ensure that they remain closely involved throughout. It is only through collaborative working involving ward clinicians, Estates, and IPCT that the correct decisions can be made by those overseeing a project to ensure a safe environment is delivered as described in SHFN.

Infection Control Nurses

45. Understanding the role and remit of the ICN is essential in understanding the importance of IPCT. They should liaise daily with ICDs and/or Microbiologists, ensuring the ICD is briefed and up to date with any significant incidents and outbreaks. It is also their responsibility to deal with referrals from Microbiologists, clinical staff on wards, and from Estates and management.

46. ICNs provide guidance on IPC to patients, relatives and staff to reduce the risk of infection. They identify hazards and risks and prevent, control, and manage HAIs. They should ensure that the appropriate IPC policy is in place and is kept up to date, and rely on evidence based guidelines, standards and current legislation in delivering the IPC service.

47. It is the role of the ICN, acting as part of the IPCT along with the ICDs, to investigate and manage the source of outbreaks and incidents as they arise, which may include providing advice on ward closures and re-openings.

48. In addition to embedding themselves in project teams in the manner outlined above, the ICN will also participate in the application of HAI SCRIBE, which is a risk management tool designed to identify infection risks and provide for collaboration with others to mitigate the risks.

Infection Control Doctors

49. An ICD is normally a Consultant Microbiologist who has IPC sessions allocated to them as part of their job plan. The ICD should ensure the delivery of an evidence-based IPC service, based on the current legislation, standards, and guidelines. They should have expertise in IPC, which may include ventilation and water, but should also understand their limitations and when there might be a need to ask for expert advice, which may be within the Health Board or externally through other agencies or specialists such as Public Health Scotland, Health Facilities Scotland, Health Protection Scotland, or other experts.

50. Microbiologists and ICDs provide a crucial link between the laboratory and the IPCT. The interpretation of results and their significance is crucial. The Microbiology department may be the first to alert the IPCT of a problem, with an interim report before the result is ready to be finally reported. The BMS staff also play a role in reporting 'Alert Organisms' to a Microbiologist before they are formally reported. Immediate action and precautions may be required which may stay in place or be removed if they are not needed once the final result is reported.

51. There is an automated reporting link between Microbiology and the IPCT for organisms which are on the HPS list of Alert Organisms in relation to which there is compulsory reporting. The responsibilities for managing and investigating these organisms are outlined in Chapter 3 of the NIPCM for health and care settings and also within the Management of Public Health Incidents Guidance. This is all part of the day to day workload for the IPCT. However, it is important to be clear that it is not just Alert Organisms that need to be carefully considered; the IPCT need to be on the lookout for any unusual pattern of infections or incidents regardless of whether an Alert Organism is involved or not.

52. The ICD has responsibilities similar to the ICN and there is some overlap. The ICDs remit will also include, (i) ensuring on-going training in IPC throughout the Health Board, (ii) ensuring that the IPCT and medical staff work together and share information, (iii) identifying risk and managing risk using the Risk Register at the appropriate level, (iv) using the escalation management reporting lines within GGC, (v) engaging outside agencies in reporting infections as required, (vi) following the direction of the Medical Director, and (vii) maintaining GGC's clinical governance arrangements, including risk management.

The relationship between Microbiology/ICDs/ICNs

53. There must be good working relationships between Microbiologists, ICDs and ICNs. There must be professional respect, drawing on the expertise of the individuals involved. It is essential for ICDs and ICNs to work as a team. This did not always happen. In my opinion, there was some problematic autonomous working by ICNs. This was probably relevant to what subsequently happened and the attitude of ICNs to the role of ICDs.

Pre 2008 Planning for the new QEUH and RHCG

54. At the very early planning stages for the QEUH and RHCG, Dr David Stewart, who was at that time the Acute Services Medical Director, chaired a large multidisciplinary committee, which was intended to deal with the complex planning for the new hospitals. IPC was included at these preliminary stages. GGC had learnt lessons during the construction of the New Victoria Hospital where costly errors had been made and needed to be rectified before they opened because IPC had been excluded from the early planning stages. This had caused issues which Dr Stewart was keen to avoid at QEUH.

55. I am not exactly sure when I became involved in this committee, but I think it was around 2004. This was part of my role as Lead ICD for South Glasgow. A number of ICNs were also involved. There were lots of representatives from different hospitals and departments within GGC at these meetings because there was going to be a merging of services. Consultation with all stakeholders was seen as essential.

56. I recall a discussion at this early stage about whether to move the Brownlee Infectious Diseases Unit over to the QEUH from Gartnaval General Hospital. The decision not to move the Brownlee Unit was against the advice of IPC and the ID Consultants who thought that the ID unit should be on the same site as an ICU, which the Brownlee Unit at Gartnaval General did not have. These two services required specialised isolation facilities, which needed to be planned for and which were not part of the original specifications as the decision had been taken not to move them.

57. Document SHFM 30 Part B HAI-SCRIBE outlines the importance of IPC involvement at all stages of building or refurbishment. The Standards and Regulations in place at the time were followed in the planning that was done.

Ventilation Planning

58. It is important to identify room specifications at the planning stage. There are different kinds of isolation rooms for different kinds of patients. Protective isolation rooms are for those patients who are immunocompromised in some way and vulnerable to infection. The protective isolation room specification would require the air to be as clean as possible, with no air coming in from the outside that is potentially contaminated. This would effectively be a sealed room with air coming through a HEPA filter in the ceiling and with no air leaking in through the edges.

59. Source isolation rooms would be for those patients who are contagious and may have an infectious disease such as TB, salmonella, Clostridium difficile, Norovirus, MERS, or

Covid, which pose a risk to other patients, visitors and staff. Most patients with antibiotic resistant organisms also need isolation. Depending on the nature of the infection, a further level of source isolation may also be required. For example, for some infections a single room would suffice but for others single rooms with lobbies would be needed.

60. For departments such as Accident and Emergency, where admissions are largely unplanned, some isolation rooms would be required in case someone arrived who was suspected to have an infectious disease. We had discussions with the clinicians to understand their patient demographic so that we could decide what the requirements for a particular ward were. For example, for the ICU, we reached a decision on the number of open bays, source isolation rooms and protective isolation rooms. The clinicians made the decision on the rooms they needed for their area. The room specification for each particular type of room requires clinical input. This is not a decision for Estates or planning to make as they would have no understanding of the different patient groups and clinical needs.

61. I attended the first meeting which took place to discuss ventilation. There were two or three people present from the ventilation contractor, plus people from Estates and the building contractor. I remember that they commented on the awful smell from the neighbouring sewage works and that led to lots of debate about whether the windows should be capable of being opened, or whether it should be a fully sealed building with air conditioning and what that would mean in terms of how EC Regulations could be complied with. I only met with them once and I recall that they were going to think about how they would deal with the ventilation challenges and gain an understanding of the regulations. I did not have any further input with them as I then stood down as an ICD.

Water Planning

62. At the time of the planning of the new hospital, I know that there were discussions around the water supply at the multidisciplinary meetings. The poor quality of the water supply to the SGH, which had been known for years, was discussed. There was a history of water contamination.

63. I did not have involvement with the water situation as I did not have the necessary knowledge and training. My colleague Dr Lewis, a Consultant Microbiologist at the Victoria Infirmary, was the person who was the Lead Microbiologist dealing with water. He sat on the Water Committee, which hospitals are required to have.

64. He would keep me updated on what was being discussed at the Water Committee and I am aware that, even before the planning of the new hospital began, he was having problems with routine testing of the water in the old SGH and the Victoria in relation to legionella and bacterial counts. He told me that routine testing would be done, and the results would be reported to Estates but not passed on to Microbiology even when they required a response. For example, Dr Lewis would find out six to eight weeks after the results had become available that there was legionella in the water supply to a particular ward. He often had to chase up results to be notified at all.

65. He also told me that, around the time of the planning of the new hospital, there was discussion at the Water Committee about the need for a completely new water supply for the new hospital. This should be minuted somewhere. Dr Lewis resigned in around 2008 – 2009 because of the problems with working culture. By this point, things were so bad that he felt compelled to resign with immediate effect and without a new job to go to. He was a really good microbiologist and it was very unfortunate that we lost his expertise.

Proximity to Water Treatment Centre

66. I submitted a paper to the Independent Review about research that had been done on the impact of the proximity of the sewage works. This was dated 2002 and stated

that sewage works nuisance was being addressed by West of Scotland Water. There were 29 sewage plants across Scotland being rated as poor because the sewers were overflowing, leaking and breaching environmental limits and Greater Glasgow was included in this list. I was beginning to ask myself whether this could have been a contributing factor to the contamination of the water supply to the hospital if there was seepage into the ground. I do not know whether this concern is well founded or not as I do not consider myself qualified to reach a final view. I do know that the Independent Review report states that they had a walk round the sewage works and they were happy that it was working okay. I don't see how they can be qualified to reach that conclusion simply from walking around it.

Conclusions on the Planning Stage

67. I have described the extent of my involvement with the planning stage of the new hospital. As far as I was concerned, IPC were fully involved and working closely with the team. This should have continued after my involvement ceased.

68. Professor Williams' attitude to some aspects of the planning and commissioning process was that it was not the job of IPC to become involved. He was of the view that it was up to Estates to make sure that the commissioning, building and monitoring of ventilation met the required standards. I disagree with this approach. An ICD needs to make sure that Estates know what they are supposed to deliver and make sure that it is actually delivered so that the needs of the patients are met. The SHFN 30 and HAI SCRIBE make it quite clear that IPC should be involved at all stages of a project like this.

69. At the time, there was definitely a lack of specialist knowledge in relation to the ventilation. Dr Hood, Consultant Microbiologist at Glasgow Royal Infirmary, was the person with the most experience in employed by the GGC, but I'm not sure if he had the knowledge for such a large project. Dr Inkster and Dr Peters would later have

expertise in ventilation. External experts should have been consulted. It is not, in my view, acceptable simply to leave all of this to Estates/ Facilities.

Post 2008 Planning for new QEUH and RHCG

70. I was not involved in the planning of the new hospital after 2008. I would have expected the same level of IPC input to continue after my involvement ended to ensure that the relevant standards were met. The standards are intended to be followed and that is what should have happened.

2012

Ongoing Issues with Workplace Culture

71. As mentioned above, throughout the period which the Inquiry is concerned with there were significant problems with workplace culture and relationships within Microbiology and IPC. There were numerous concerns about bullying at every level and the previous good working atmosphere within Microbiology had been destroyed. Some Consultants were criticising their colleagues' professional capabilities in meetings and in front of BMS staff, which created an unpleasant atmosphere and made working within Microbiology very challenging, but there was much more than this. There was a general fear of speaking up.

72. As I continued in the role of Clinical Director, I became increasingly concerned about the culture within IPC and it became clear that it had deteriorated with the new structure from when I had worked in that area.

73. The reporting from staff continued for months and I appeared to be the lone voice escalating the concerns to senior management (Isobel Neil and Bernadette Finlay). It seemed that no one else wanted to step forward or put anything in writing, even as a

group, about what was going on within Microbiology. After months of raising the concerns myself on their behalf, I persuaded the senior managers to allow the staff to speak individually and anonymously to HR and OD, as I felt most staff would be more comfortable doing this. The HR manager responsible for laboratories engaged with trainee medical staff, Consultants, biomedical scientists and secretarial staff and then told me that he had formed the view that the working environment was like 'an abusive marriage'. A report was produced in relation to his findings which I was never shown. It was clear that a poor working culture had developed under Professor Williams as head of microbiology. I know that he was careful to ensure that the tenor of any written material such as emails was conciliatory and benign, but he was very different when dealt with face to face.

74. The impression I was being given from staff was that Professor Williams, Tom Walsh and Sandra McNamee were key contributors to the poor working culture in IPC. There was a spike in ICNs leaving allegedly due to the culture and behaviours within IPCT. During this time, Professor Williams told me that he would move me to another hospital to make me unhappy. I told him to go ahead and do it. He then asked me what he could do to make me so unhappy that I would retire. On another occasion, he also threatened to report me to the GMC. Again, I told him to go ahead and do it. He didn't make a complaint; he would have had no basis for doing so.

Late 2014/Early 2015 Pre-Opening Concerns

75. In mid to late 2014/early 2015, my Consultant colleagues began reporting concerns about ventilation and other issues in relation to the new hospitals. These concerns were being expressed sufficiently forcefully and frequently that I arranged a meeting with Grant Archibald and David Stewart to advise them. As noted above, this was at around about the time that Dr Peters was recruited. I only did this because my colleagues felt that reporting their concerns via the usual reporting lines was not resulting in the necessary action.

76. Because of my previous management experience and understanding of processes within GGC, my colleagues felt that I had a clearer understanding of the workings of management and I may have had easier access to senior managers and be more able to influence them in addressing these concerns. I kept emphasising to them the need to follow the GGC management reporting lines and said that they should put things in writing, despite being told not to put things in writing by management.

77. The results of the air sampling that had been done in the new hospital as part of the commissioning process were giving rise to concerns. The Microbiologists had discovered that, during the air sampling process, there were only three air changes per hour as opposed to the six air changes which were required according to the standards. They had also isolated micro-organisms, including Mucor in the paediatric haematology/oncology ward. These concerns were being raised through the recognised management reporting lines, including at Microbiology meetings and through IPC. There was a general concern that they were not being listened to.

78. I initially reported the Microbiologists' concerns about the ventilation and air sampling to the Director of Diagnostics, Aileen McLennan. Her predecessor was Jim Crombie. I cannot remember exactly when she took over from him but it was between 2008 and 2011. I spoke to her because that was in keeping with the reporting lines in place at that time. Her response to me was to ask if I really "wanted to end my career like this". She should have then taken the matter to Grant Archibald and the Medical Director herself, but by then I had lost faith in the system and I decided to take the concerns to them directly.

79. I met with Mr Archibald and Dr Stewart and I explained the concerns that my colleagues were reporting through the IPC management lines and the fact that appropriate action did not appear to have been taken. I explained that my colleagues had the details of all the concerns that had been raised. I do not know if the concerns were escalated after the meeting. I did not receive any update from them to tell me about any actions arranged in light of what I had told them. After any meeting like that I would usually send an email thanking them for taking the time to meet and listing

the concerns that we had discussed. I don't have access to those emails now. GGC should have access to the emails of those still employed. I would have thought they should also have my old emails, although I have been told by William Edwards that the emails of previous employees were routinely deleted when the employee left the organisation. I cannot now recall the detail of what was discussed. Based on my previous experience of working with Mr Archibald and Dr Stewart, I would have expected that they would have taken my concerns seriously. I would not expect them to simply ignore what I was saying.

80. I do recall that I discussed the ventilation problems, and in particular I advised them about the air changes and the Mucor. I told them (based on the advice I had been given) that Mucor had a mortality rate of up to 85% in children. The Mucor had been detected within the protective isolation rooms where immunocompromised children would be placed. I don't know who had carried out the air sampling. These sampling results are likely to have been recorded on the Telepath system or by Dr Inkster and she would probably still have access to these results.

81. Mr Archibald disputed the mortality figure in relation to the Mucor, stating that it was a 65% mortality rate. From the literature, I knew that this varied between 50-85% depending on the patient cohort. Mr Archibald said that the ventilation concerns were merely "my opinion", although I was not the only microbiologist with concerns. I agreed and suggested that an external expert should be asked to evaluate the differences in opinion. I said I would accept any evidence-based opinion if I was wrong. I also asked if there was a warranty with the contractors to address the concerns, but did not receive an answer. I also recall telling them about the issues with the working culture, and that this was leading to a loss of expertise because people did not want to continue as ICDs. This is a risk to patient safety.

82. I received no feedback from senior management addressing the issues. I continued to tell them that they still had a problem. I sent further emails to Mr Archibald, Dr Stewart, Jane Grant, and Dr Armstrong. Again, I do not have access to these emails but GGC should have them, for those still employed. I took more of a back seat once

Dr Peters started in her role as she identified the same concerns I had reported and began reporting them herself, in her role as ICD. She was also identifying new concerns.

2015 - Post Opening Concerns

83. Following the opening of the QEUH and the RHCG, the same concerns persisted in relation to the ventilation, the air quality and patient safety and care, and Dr Peters and the other Consultant Microbiologists were also identifying new issues.

84. Dr Peters identified a problem with Exophiala amongst patients with CF. Exophiala is a fungus that was linked to dishwashers on the CF ward. This can be significant for CF patients as they often have to get lung transplants and, if they were to get Exophiala in their lungs, then their chances of getting a transplant are significantly reduced. There are also cross infection risks to other patients. I do know that, as a result of this incident, the dishwashers were removed, as these were found to be the source. That is an example of IPCT doing the right thing; there is a problem, it is identified, and measures are put in place to deal with it. What I don't understand is why the dishwashers were installed in the first place as I would always have been wary of having dishwashers on a ward with high risk patients because they can carry a risk of infections and they have to be properly maintained. I subsequently discovered (in 2017) that the dishwashers had never been cleaned. I believe that guidelines said they were meant to be cleaned three times a day in this type of unit.

85. I am also aware that Dr Peters identified issues with Mycobacteria, again in relation to CF patients. I know that she wrote an extensive report in relation to this and sent it through IPCT and then to the Clinical Director for Laboratories. I believe she may have sent it to the Medical Director for Laboratories (Rachel Green) as well.

86. In addition, Kathleen Harvey-Wood, who was a clinical scientist working within Microbiology, was concerned about the high level of resistant organisms in her group

of paediatric patients. She only dealt with paediatrics, so she knew her patients well and her view was that there was a higher level of resistant organisms and unusual organisms than she would have expected and that this was not the pattern that she had previously seen at the old hospital at Yorkhill. On one occasion Kathleen Harvey-Wood was told that she should stop reporting problems like this by Sandra McNamee. I believe this was in an email. I don't have access to the email but others should have it.

87. Another big issue that came up was that Microbiologists did not know which rooms within the hospital were suitable for different categories of patients. It is very common for Microbiologists covering IPC during the day and out of hours to get calls from wards asking where patients should be placed when they have particular suspected or confirmed infections. We needed to have information about which rooms met which standards so that we could isolate patients with suspected or confirmed infections (for example those with conditions such as Norovirus, Salmonella or TB). We could not get the necessary information on which rooms were safe to care for infectious patients. That was a problem that went on for years, even after I retired. Some patients had to be moved to other hospitals and health board areas because South Glasgow did not have the facilities to care for certain conditions, such as multidrug resistant TB.

88. Dr Inkster was appointed to take over from Professor Williams who had resigned as Lead ICD and Consultant Microbiologist. The pressure on Dr Peters became so unpleasant that she felt that she had to give up her ICD sessions. Dr Peters should never have been placed in that position in my view. I expressed my concern that Dr Peters' departure was a serious problem because of the huge loss of expertise. This expertise continued to be used to support the IPCT, even though she was no longer an ICD.

89. After Dr Inkster's appointment as Lead ICD, Consultant Microbiologists were still raising ongoing issues. I could see the stress it was putting my colleagues under, so I

thought I would try to take the attention from them and get management to focus on me. I was nearing retirement so there was very little that could be done to me. My colleagues still had a career in front of them. That being the case, I decided to speak to Senior Management again. I spoke with Dr Stewart at least once, explaining there was still a problem with IPCT. I was sending intermittent emails. I also remember having a meeting with him. He thought that the departure of Professor Williams would solve the problems. I knew that it wouldn't, and I told him that. I cannot recall if I spoke to Mr Archibald again.

90. Microbiologists felt that issues were still not being addressed or managed. The isolation rooms did not meet the required standards, and there were ongoing sewage leakages in the neuro-sciences theatres and building. I can't really remember all of the concerns that my colleagues and I had regarding patient safety and care in relation to these issues. I just recall that there were outbreaks and there were issues with the water and ventilation. We also had concerns about where we could isolate patients and which rooms were safe. This was creating a possible risk of spreading infections to other patients, visitors, and staff. There was an increase in the number of resistant organisms in our paediatric patients.

91. The details of these conversations were supported by emails, which I also copied to several senior managers. I no longer have these emails as discussed above. GGC should have them stored on their email servers somewhere.

2016

92. During 2016, there were weekly Consultant meetings held and we began recording all of the IPC issues. These concerns were a regular agenda item for each meeting. It was at these meetings that I requested that minutes be taken. This was done by Pauline Wright. However, we were subsequently instructed by Professor Jones not to minute the meetings. I was a CPA (Clinical Pathology Accreditation) inspector (a qualification for delivering a lab service) and part of the standards was a requirement to record and

minute meetings as part of the accreditation criteria. One of the clinical scientists attending these meetings was Kathleen Harvey-Wood, who had received the email from Sandra McNamee telling her to stop reporting concerns.

93. Throughout 2016 and early 2017 I noticed that an unusually high number of ICDs were resigning from their ICD sessions, and I felt that senior management should be looking into this. Dr Inkster, Dr Peters, Dr Wright, and [redacted] will all be able to explain themselves why they resigned from their sessions, but I was concerned that this led to a huge loss of expertise and, therefore, was of itself a risk to patient and staff safety.

2017

February 2017 meeting with Robert Calderwood

94. In February 2017, I decided to raise the ongoing concerns with the then CEO Robert Calderwood, who was due to retire at the end of March 2017. I had worked with him over many years, and we knew each other quite well. He agreed to see me to discuss the issues. During this conversation, I raised the concerns about ventilation, and he told me that I could not expect to reach a "gold standard" with everything. He said "that Peters woman is creating problems". I was struck by this comment as I knew he had never actually met Dr Peters at this stage. He had obviously already formed a very negative view of her, presumably based on reports he had received from others and seemed to have made up his mind about the concerns she was raising. I felt there was no point in carrying on the conversation as I knew I was not going to get anywhere. I decided to wait and speak with Jane Grant, who was taking over as the new CEO in April 2017 and who I had worked with in her previous role as COO.

April 2017 – Communications with Jane Grant

95. In April 2017, Jane Grant took over as CEO. After allowing her time to find her feet, I approached her to raise my colleagues' concerns about the issues with IPC.

96. I had worked closely with Jane Grant in the past when I was an ICD, and she was the COO. She had previously been diligent in understanding the problems with the theatres, listening to advice and warnings, and efficient in ensuring that everything was put in place to resolve the problems as quickly as possible. As I was only working two days a week and not always available, I exchanged a number of texts and emails with her during which I highlighted my concerns. I specifically told her that I was giving consideration to starting the Whistleblowing process.

97. I initially contacted her by email. She phoned me and we discussed my concerns and I felt that she listened to me.

98. I don't think I went into a lot of specifics with Jane Grant about the risk to patient safety, but I did speak to her generally about the recurrent problems with the ventilation that had been ongoing since the hospital opened. I mentioned the issues with water leaks and more generally the issues with the building which I thought should not be happening in such a new facility. I also raised the concerns about patients being put inappropriately into rooms as the Microbiologists did not know which rooms reached the standard required for particular patients. I emphasized that I felt there was a fundamental problem with IPCT.

99. After we had this phone call, I sent a text to her dated 21/4/17 and I told her that I had documents and reports available if she required them and I offered to have a meeting with her. I don't recall what I was referring to there, but it would have been information around the outbreaks. Jane Grant then sent me two text messages, both dated 21/4/17. The first one indicated that she had spoken to colleagues and asked them to consider appropriate issues/actions. The second text stated: "*Just to let you know that a review of the paed ward situation is under way to ensure appropriate learning is taken on board. I have asked the managers to ensure that you have the opportunity to contribute. Hope that's Ok. Jane*". This was the first of several occasions

when Jane suggested that someone would be in touch to discuss my concerns with me; in fact no one ever contacted me.

100. I can't remember exactly what she was referring to in relation to the paediatric ward. There were multiple known issues at that time, and it could have related to any of them.

101. I did not have the opportunity to contribute, although all I was looking for was to be reassured that action was being taken. I do not know whether people like Dr Peters and Dr Harvey-Wood were specifically asked to contribute. It would have been more productive to have spoken to them as they would have had a better command of the detail at that time than I had.

102. I sent a further text to Jane Grant on 28/4/17 thanking her for her update by text and saying that I had heard things were happening. At this time, I also sent her emails which would have had more detail around what we were discussing. I don't have access to those emails now. I can't recall if I sent her any of the documents or reports. Dr Peters may have done so.

Summer 2017

103. Between April and September 2017, there continued to be issues with concerns still being raised within IPC and they were being reported to me, as well as being reported through the appropriate channels and discussed at consultant meetings. I do not recall exactly what discussions I had with Jane Grant, but we were occasionally in contact over this period of time.

104. [redacted] was beginning to think that there may be links between infection and the water supply because of the bacteraemias that we were seeing in the paediatric patients. [redacted] was asking for enhanced water testing to be done and [redacted] was having difficulty getting IPCT and Estates to agree. This issue was referenced in the SBAR that we subsequently produced, which is discussed in more detail below.

105. Around this time, [redacted] was also reporting to me that [redacted] was concerned that [redacted] was being put under pressure to sign documents, but I cannot recall exactly what these documents related to. [redacted] did not feel comfortable signing off the work as [redacted] did not feel that [redacted] had all of the necessary information despite several requests. I told [redacted] that [redacted] could not sign off on a document if [redacted] did not know that it was factually correct, but [redacted] felt a lot of pressure to do so though I believe [redacted] ultimately refused. I had a discussion with Professor Jones about this and stressed that we should not be asked to sign off on any works/projects etc without being given all of the necessary information to be satisfied that sign off was appropriate.

106. ICDs also felt that they were not being kept up to date with issues that were arising, for example, they were not told about the sewage leaks in the neurology building which I believe were affecting areas including operating theatres. The potential risks to patient safety arising from a sewage leak, particularly in these areas, are obvious. I believe Dr Peters told them that they should stop using these theatres until the leaks were fixed. I remember her suggesting using the new theatres in the QEUH before the hospital opened to allow the remedial work to be carried out.

September 2017 – Stage One Whistleblow

107. At this stage some of my colleagues wanted to raise concerns directly with the media. We took advice from MDDUS and BMA and were told that we needed to properly exhaust internal procedures before escalating things in that way. We obtained GGC's Whistleblowing policy. Stage 1 of the policy involved contacting the same people we had already been reporting our concerns to, so we felt that it would not be particularly fruitful to do this again, but we did not want to be criticised for not following the policy to the letter, so we started with Stage 1 even though this was largely an exercise in repetition.

108. I cannot remember the chronological order of the specific concerns about the risks to patient safety and care from the built environment which we had already

raised. Current staff should still have access to the data. The issues included ICDs resigning as they did not feel able to carry out their duties safely, ICDs failing to be provided with information to allow them to make decisions about IPC issues, Consultant Microbiologists not being given information as to which rooms were safe to isolate patients in, concerns about the rising numbers of unusual infections in patients within ward 2A and the PICU in the RHCG and an increase in resistant organisms. No one was sure what the exact cause of the problems was at this stage, but we knew that several lines of investigation had to be carried out.

109. At this point, we were not convinced of any relationship with the infections and the built environment. We felt this was one of a number of possible causes. There were clearly problems and we did not know what the causes were. We wanted them to be properly investigated to see if any causes could be identified and dealt with. The water as a source was one of the possible causes of infection which had to be investigated. So was the ventilation.

110. I had contacted senior managers during May/June 2017 and advised them that we were considering following the Whistleblowing procedure in the hope that they might engage with us. I still fail to understand why they would not engage with us in order to attempt to find a resolution to the obvious increasing tensions. I had contact with Tom Walsh, Sandra McNamee, Jane Grant, Grant Archibald, Dr Stewart, Dr Armstrong and Aileen McLellan amongst others. I spoke to Jane Grant on the phone. I emailed Dr Armstrong. I met face to face with Grant Archibald, Dr Stewart and Aileen McLellan and outlined our concerns. On 5 September 2017 I emailed Tom Walsh, Sandra McNamee and Professor Jones. On 15 and 21 September 2017 I emailed Jennifer Armstrong and Dr Stewart specifically saying we were going to use the Whistleblowing procedure. I do not recall receiving a response to these emails. Having received no satisfactory response, Dr Peters, [redacted] and I began the Whistleblowing process at the end of September 2017.

111. I located the GGC Whistleblowing policy on the intranet, although I think it was two years out of date as most of the people listed for the Stage 2 process no longer worked for GGC. We followed it to the letter. I have produced the two Whistleblowing policies that I used in 2017 and 2019.

112. Staff were not encouraged to use the Whistleblowing procedure. Prior to either the Stage 1 or the subsequent Stage 2 Whistleblow (I cannot now recall which), I was urged not to Whistleblow by the Jane Grant. I recall her specifically saying to me that she "urged" me not to do it. When I subsequently said I was going to raise a Stage 3 Whistleblow about the fact that GGC would not acknowledge the raising of a Stage 1 Whistleblow and that I thought it was a cover-up, a non-executive director (Ian Ritchie) spent 45 minutes trying to talk me out of it during a phone call, which was not appropriate. He repeatedly asked me "what can we do" to stop me doing it.

113. The culture and perception within GGC at that time was that a Whistleblower should be seen as a troublemaker who was to be criticised for raising concerns and causing stress to patients and relatives. The Independent Review personnel made a statement to this effect during my interview with them. I was accused of causing stress to patients and relatives. They obviously already had a very fixed and negative opinion of me before they met me. As whistleblowers, we considered this very carefully, but still felt that we had no choice but to proceed in order to ensure the safety of patients in the long term. This is why we followed all the possible options within the GGC organisation and took advice from the BMA, GMC and MDDUS. We gave them numerous opportunities to engage with us and reassure us that things were being addressed and improving, but we all continued to see the same and new problems arising.

114. We sent an email to Dr Armstrong setting out our concerns. This was the start of our Whistleblow. In response to our email, Dr Armstrong asked us to put the concerns in an SBAR and a meeting was fixed to discuss our concerns on 4 October 2017. SBAR is a structured communication tool used by the NHS and consists of

standardised prompt questions in four sections, namely **S**ituation, **B**ackground, **A**ssessment and **R**ecommendation. I have produced the SBAR dated 3 October 2017 which was produced by Dr Peters and myself and also included the concerns raised by [redacted].

115. I sent a further text message to Jane Grant on 27/9/17 as follows: "*I feel I need to let you know that I have had to contact Jennifer Armstrong and David Stewart to alert them of my concerns in relation to infection control. The number of problems are increasing and I have been in twice from my annual leave to contact them. They are not expecting me to be back until 5th October so have not responded in writing.*

Today I alerted them that I feel I will need to go to stage 2 of the Whistleblowing Policy if a meeting is not arranged by 11th October to ensure that there is a record of all the current concerns being raised by a number of Consultants with an action plan.

I have offered to speak to them with a colleague before any meeting. I will make myself I available to come in from leave. I am abroad Friday and Monday.

I felt since you were kind enough to listen to my concerns previously it wouldn't be reasonable if [sic] me not to keep you up to date.

A meeting needs to happen as I have outlined. I do not want to take this to Stage 2.

Sorry to add to your pressures but these issues need to be understood and reasonable action plan put in place. This is not the situation today. Regards Penelope Redding"

SBAR of 3 October 2017

116. I have produced the SBAR which we prepared. The concerns are detailed in full within the document so I will not rehearse them here for the sake of brevity. They included patient placement, cleaning, Estates, water quality and testing, the plumbing

within the neurosurgical block, decontamination arrangements, and the infection control structure.

Meeting on 4 October 2017

117. The meeting to discuss our SBAR took place on 4 October 2017 and was chaired by Dr Armstrong. Dr Peters, [redacted] and I all attended. The other attendees as I remember were; the Director of Facilities, Deputy Director of Nursing (Morag Gardner), Dr Rachel Green (Medical Director of Diagnostics), Professor Brian Jones (Head of Microbiology), Tom Walsh (IPC Manager), Sandra McNamee (Associate Nurse Director IPC), Jonathan Best (Chief Operating Officer), David Louden (Director of Property and Procurement), Ian Powrie (Depute General Manager, Estates), Anne Harkness (Director, South Sector), and Gary Jenkins (Acting Director, North Sector). They are all very senior members of staff.

Patient Placement

118. I had an active role in the meeting, and I tried to speak as much as I could to explain the issues. I spoke about source isolation and the isolation rooms not being built to the correct standard. I explained that we were concerned that they would not provide protection for patients and staff, especially in high consequence infections such as MERS and multi drug resistant TB. David Louden told us that the rooms did conform to SHTM 04-01 and that it was incorrect to state that they didn't conform. I am not sure that he was right about that.

119. There was also discussion about the fact that the ID unit was a late amendment to the QEUH project and so was not commissioned as an ID unit at the outset. The ID Consultants and the Microbiologists were keen for ID to move to the new hospital at the planning stage because there was no ICU on site. We were told that this could not be done because it would be too expensive, and instead a smaller sum would be dedicated to upgrading the existing unit at Gartnaval General Hospital. I don't know

why the position was then changed and the ID unit was moved. Sandra McNamee stated that they were awaiting advice from HPS as to what standard the rooms needed to be to accommodate ID patients and said that when this information was received, Estates colleagues would assess whether these modifications were feasible. I do not know why this discussion with HPS hadn't happened at the time the decision was being made to move the ID unit to the new hospital which was over two years earlier. Anne Harkness stated that unless the existing rooms could be modified in some way, the only alternative would be to build a new ID unit and that would require significant resource.

120. The next issue that was discussed related to protective isolation and specifically the issues in ward 2A in the RHCG. The outbreak of aspergillus and concerns over line infections were discussed. Sandra McNamee stated that there had been cases of aspergillus in March and April associated with a leak in the ceiling space. This had been investigated, tiles were removed and replaced and there were no other cases of aspergillus. However, this did not address the question of why there were leaks in the first place in a new and apparently state of the art building. These leaks were happening in other areas – I am aware of leaks in ICU and the renal unit and was aware of other aspergillus cases. We were not told how many cases there were altogether. I do not know, but I suspect this was why all the children on the ward were put on prophylactic IV amphotericin B which is a toxic antifungal agent. To my knowledge this should only be used to treat patients who are known to have an infection. I do not know if the necessary investigation work was done to establish if the aspergillus cases had stopped due to the leaks being fixed or because all the patients were on IV prophylaxis. I believe prophylactic IV amphotericin B was given to all of the patients on several occasions despite the significant risk of toxicity. This is potentially very dangerous particularly for children who are already on a significant number of potentially toxic medications. I do not believe that it is standard practice to routinely use prophylactic IV amphotericin B in all patients in this patient cohort. When I was there, I know that on three occasions they used prophylactic IV amphotericin B for all of the patients on the paediatric haemato-oncology ward. It

would be important to find out whether this happened more than once because there were concerns about patients being infected. It was clear from the evidence of these patients and their relatives given to the Inquiry at an earlier stage that other antimicrobial drugs were also given after I left which caused some patients to suffer from very unpleasant and sometimes permanent toxic side effects. I found this very distressing to hear.

121. Ian Powrie stated at the meeting that there had been no request for HEPA filters to be installed in ward 2A, and that is why there were no filters. I find that extremely surprising given the type of patients cared for on that ward. This should have been checked before the final signing off of the specification of the rooms by IPC. I am not sure that the necessary standards were complied with.

122. I raised the concerns we had in relation to the increase in line infections within ward 2A. Sandra McNamee assured us that there was an ongoing investigation into this by IPC. Jen Rodgers was carrying out an improvement group looking at PVC and CVC bundles and Sandra's view was that this should have an impact on the number of infections. I was concerned that this approach may not accurately pick up all infections. It is very difficult to monitor line infections and it is very resource intensive, requiring the involvement of a number of staff groups. I thought it would have been better to look at unusual organisms that microbiologists were raising concerns about over a fixed period, for example, to look at how many incidences of Stenotrophomonas etc there had been over, say, a two year period and comparing the numbers with those in Yorkhill Hospital. I had concerns about whether the monitoring they were carrying out in relation to line infections was the right monitoring, and whether it would actually detect the underlying causes of infection. Obviously, putting an improvement package in place should reduce line infections, but most incidents are multifactorial and other possible risks have to be understood and addressed. If the organism is still in the environment, then the risk of infection will persist even though the risk might be reduced.

123. I think this concern was borne out when it came to light later that the deaths in 2017 were linked to the water and the central lines. [redacted] was asking Estates and IPCT to do enhanced testing of the water in 2017. It wasn't until 2018 that GGC acknowledged that there was a possibility that infections related to the water despite [redacted] having raised this concern the year before.

124. The next point that was discussed was the safe placement of immunocompromised patients. We needed to know as microbiologists which rooms in the hospital were safe for these patients. Clinicians also needed to have this information so that they could decide where a patient should be placed. I don't think the IPCT and Estates knew the standards of the rooms and that is why they couldn't make up this list, which should have been easy to do. One example was that we ended up in a situation where the Beatson was moved over to the QEUH but had to be moved back as the rooms in the adult BMT unit were not suitable for these patients. This had not been provided for in the original plans and should have been checked before they moved the patients over.

125. I then raised the point that there were infections and outbreaks that did not appear to be being taken seriously or being monitored appropriately. I think with hindsight we can see that was correct. They seemed to be very focused on specific reporting and results relating to Alert Organisms and other listed organisms and were not interested in the bigger picture and the more unusual organisms/ incidents. Infection control and outbreaks do not necessarily follow textbook definitions and infection control professionals need to have an open mind to unusual occurrences. Experience also helps alert people to risks.

Ventilation

126. The standards said that there should be six air changes per hour in a standard room, so that should have been what was installed. The QEUH and RHCG only had

three air changes instead of six. I was told by David Loudon that the air changes in particular rooms could not be changed. I didn't know if that was correct, but I did wonder why the correct ventilation system with the correct air changes was not installed in the first place. I am not sure that there is any legitimate basis for this departure from the guidelines. It would be my assumption that the purpose of the guidelines is for them to be followed.

127. I know that there were also concerns around chilled beam technology, but that is something that Dr Peters would have to be asked about, it is not my area of expertise. Dr Peters did suggest at the meeting that the issues we were having should be shared with Monklands Hospital who were at the commissioning stage of a new build hospital. I have no idea whether this was done as we got no feedback.

128. The cleaning of the chilled beams was also discussed and it seems that the fact that they needed to be cleaned had only just occurred to them. I don't know why a cleaning schedule was not already in place before the hospital opened.

129. I suggested that Microbiologists be included in the monitoring of the cleaning by looking at microbial counts. I thought we should check the counts in the air before and after cleaning had taken place to make sure that whatever measures were being put in place were effective. In single rooms there is an argument that you do not need to clean as often because, for example, the toilet is only being used by a single patient.

130. Professor Jones said at this point that rates of infection may also be a useful indicator. Sandra McNamee said that during a point prevalence survey QEUH was found to have levels of infection under the national average and that all Alert Organisms were monitored by the IPCT and that there were no indications that this site had a higher than average infection rate. This would not pick up unusual organisms. The prevalence of unusual organisms was one of our key concerns. A point prevalence study relates to a single point in time carried out every four years, and so would not pick up the line infections or outbreaks that we were concerned about. This

is where a proactive IPCT should be investigating to see whether or not there was a problem.

131. I thought that we should have looked at all of the cases of bacteraemias/line infections with unusual organisms from first to last. I understand that the first case of an "environmental" organism was in 2016. We should have looked at the infections from the time of that first case and over the following year. Instead HIS did an audit which just looked at January to September 2018. That could then perhaps be compared to a 12 month period in Yorkhill. That might reveal peaks and troughs and whether there were any trends, and whether any of these infections had also been present in Yorkhill. We could then have determined whether we had more infections and whether we had a problem. I was told that none of this needed to be done because the point prevalence survey showed there was no problem. There was a problem. We were told there was no problem every time we raised concerns about the risk of infection.

132. I do not believe that ignoring all of the infections in 2016 and 2017 could possibly facilitate an accurate analysis of the problem. This was also the period in which concerns were being raised regularly, enhanced water testing had been requested, and the Stage 1 Whistleblow raised. The analysis should have included all 2016 and 2017 data and have been compared to an equivalent period from Yorkhill.

133. I believe a lot of the patients who had infections in 2017 were part of the Case Note Review and, in my view, normal practice would be to analyse the numbers from the first case to the start of the investigation, so from 2016 to September 2018, rather than limiting the review to 2018. The HPS report also failed to compare the number of cases for the same organisms over a 6 to 12 month period for the same cohort of patients prior to the RHCG opening. This would have identified whether the infections were in line with previous experience or possibly linked to the new hospital. I felt this was another example of failing to grasp what was going on at QEUH and RHCG. This approach will have painted an inaccurate picture to the Health and Sports Committee. The Stage 1 Whistleblow included the events of 2017, yet they were also excluded

from the HPS report. There was clearly a lot going on in 2017 and this data would not have been difficult to collect and analyse.

Cleaning

134. Sandra McNamee stated that antichlor was used throughout the winter Norovirus season which is between November and April. She also said it had been introduced for general cleaning into the wards with CF patients in the QEUH and PICU, NICU and ward 2A in the RHCG. I wondered why it was not already in place for these high-risk patients. I don't know if this would have been done if we hadn't raised the Whistleblow.

135. We also discussed the dishwashers and the response was that the problems had been dealt with, but my point was that there was clearly an issue with the audit system as no one was monitoring or maintaining these dishwashers. Even the basic manufacturer's instructions were not being followed. As I mentioned above, the instructions said they should be cleaned three times a day, but they had not been cleaned at all since the hospital opened. When this was discussed, Professor Jones said it was not an outbreak. He suggested that the patients had picked Exophiala up in the community. I said that two or more cases was the definition of an outbreak. I pointed out that there had been no cases prior to the move and at least 15 since the QEUH opened, so community acquisition was unlikely.

Water quality and testing

136. At the meeting the response to our concerns over water testing was that there was a GGC water safety policy in place which had been approved by all of the appropriate governance committees, there was strict guidance on how to monitor water systems and what processes were in place and the water testing carried out was as per protocol. In addition, there was exception reporting if issues arose and an ICD requested that enhanced sampling be undertaken.

137. The reality was that Microbiologists were not getting results when they asked for enhanced sampling. They often did not even get the results of routine testing. Around August 2017, [redacted] was repeatedly requesting enhanced water sampling and did not get it. Ian Powrie mentioned that the delay might have been because of changes in staff in IPC and Estates, but I don't think that's the reason. We needed testing done and it wasn't done. A change in staff should not have affected that. I don't know what happened, or whether it was overridden by someone more senior in Estates or in IPCT. Another excuse they gave, and this was what went out in press releases, was that the link with the water was not made until 2018 and that testing could not be done. Both of those statements are incorrect. A possible link had been made by [redacted] in 2017. Routine testing looks for the numbers of organisms present. Enhanced testing identifies the particular organisms which are present. GGC said they could not do enhanced testing because they did not have an SOP in place for it. This just wasn't correct. They could have done it at the Royal Infirmary or sent it to an external laboratory to do it. GGC later acknowledged that they could have done this testing as part of their response to my Stage 3 Whistleblow.

Plumbing in neurosurgical block

138. As I mentioned above, there had been sewage leaks in the neurosurgical block and ICDs had heard through the grapevine that not all of them had been reported to IPC. Gary Jenkins responded that the issues in the building were complex and would take years to resolve. In the meantime, there were due to be new theatres opening in January 2018. He also said that nursing resource had been made available to carry out surgical site infection (SSI) surveillance in this unit. Dr Peters had raised concerns in 2015/2016 about these issues and suggested using QEUH theatres prior to the hospital opening whilst work was undertaken on the neurosurgical theatres. She had been told that some remedial work had been done. I don't know if this work actually happened.

139. My response to the surgical site infection surveillance would be why did that need to be done when it was fairly obvious that a sewage leak in theatres or the wards would be a risk to patients. I would have thought it would have been better for them to concentrate their efforts on solving those problems. I might put that surveillance in place once I had made efforts to fix the problem, but not whilst the issues were ongoing. This is a waste of valuable resource.

140. In addition, the new theatres he mentioned did not open until 2020 as there were issues with the ventilation systems there. This would suggest that lessons were not learned as a result of our SBAR and the subsequent meeting in 2017.

Infection Control Structure

141. Dr Armstrong's response to our concerns about the IPCT culture was to arrange to have a separate further meeting. I do recall that we eventually had a meeting in February 2018. This included the microbiologists, some of whom were ICDs, and Rachel Green and Isobel Neil. No action had been taken following this meeting when I retired.

Reflections on the 4 October 2017 meeting

142. It was a difficult meeting with a lot of disagreement about the issues we were raising. Some of us felt quite intimidated by the attitude of some of the attendees. I felt that issues were being diluted by dividing problems between individuals and there was no overall plan to pull everything back together again afterwards and engage with us again.

143. As set out below, an Action Plan was subsequently drawn up, so there was clearly an acceptance that a lot of what we were saying was correct and couldn't be ignored. I doubt whether they would have acted if we had not proceeded with a

Whistleblow. It is really disappointing that we had to resort to a formal Whistleblowing process to get the Action Plan prepared.

144. There was a reluctance to accept what we were saying, and we were treated as a nuisance rather than being respected for our professional experience and opinion. There was no acknowledgment or thanks that we had raised these matters which needed to be resolved. The reality is that the Action Plan was put in place and they had to take action on virtually everything we said. We were not suggesting that the solutions were not difficult, or would be resolved quickly, but they did need to be acted upon. We asked them to inform the other Health Boards of these issues so that the same problems would not be replicated elsewhere. I am not sure if this was done.

November 2017 – Consideration of Stage 2 Whistleblowing

145. In October/November 2017 the Action Plan was not yet available. I started warning Jane Grant, Dr Armstrong and Dr Stewart that we were considering a move to Stage 2 of the Whistleblowing policy. I was being told by colleagues at the regular Consultant meetings that there were still serious concerns about patients. The Microbiologists also still had concerns about the use of prophylactic IV amphoterecin B being used on a number of occasions for all of the patients on the paediatric haemato/oncology wards. My colleagues were still talking about going to the press and my concern was that nothing was changing. I had no evidence at that point that there would be any meaningful change and new issues and concerns were arising.

146. No one from Senior Management ever meaningfully engaged with us after the meeting in October 2017. Our emails were either ignored altogether or we were criticised for sending them. Where we did get a response, it was unsatisfactory. I received an email from Rachel Green, the Medical Director of Diagnostics, telling me that my emails asking for updates could be perceived as “harassment”.

147. We might have been reassured if someone had actually sat down with me and Dr Peters and [redacted] and talked about what we could do in the short term to make things better. We did not expect all of the problems to be fixed at once and some of the issues would inevitably take a long time to resolve, but there did not seem to be any effort to reassure us that immediate issues were being dealt with. In 2018, ward 2A had to be closed as there were still ongoing problems. That was a year after we had been saying that problems needed to be urgently addressed. There was no feeling that lessons had been learned and problems solved even when the Action Plan was produced.

148. In around November 2017, I told the GGC HR Director that consideration was being given to moving to Stage 2 of the Whistleblowing policy. I don't believe we had the Action Plan at this stage. I emailed Anne Macpherson, HR director. She was responsible for the whistle blowing policy and I contacted her to ask for clarification about who to contact about Stage 2, as the policy was out of date. She advised me that she could have no involvement with the process and provided me with the names of two other people that we could go to. I also contacted Jane Grant and told her I would be happy to meet with her to discuss matters, but she said that Dr Armstrong would keep her informed and up to date. Jane Grant later said the senior IPCT would arrange a meeting with us, however this never happened.

149. Around about this time I was covering a weekend on-call, which was not part of my duties, but there was no one else available to do it. At around 4pm on a Friday I got a phone call advising me that there had been a total cessation of orthopaedic services across the GGC area. The next day I received a call from one of the senior managers (I cannot recall who) asking me what had happened. I said I had not been involved in the decision making process so I did not know but that I would investigate and get back to him. He told me that services had been suspended and staff were refusing to allow patients to leave the hospital. This didn't make any sense as the patients would not have been a risk to anyone else once at home. I could have understood if they were being discharged to other hospitals, another ward or to nursing homes for example, but to refuse to allow a patient to return to their own

home didn't make any sense. Some doctors were refusing to go onto the affected wards, and elective orthopaedic surgery had been cancelled for the following week, because of concerns about infection risk as a result of what was thought to be a resistant Pseudomonas outbreak. On Saturday morning Professor Jones phoned my registrar who was meant to be assisting me with covering the on call to tell me that he needed them to stand down from clinical duties to collate information about all of the affected patients because there was a meeting taking place that afternoon for senior managers to be updated. There was a concern that the West of Scotland trauma service would have to be closed because of the cessation of orthopaedic services. I believe that Jane Grant came into the hospital on the Saturday for the meeting. I reviewed all of the data and I could see quickly that all of the cases in the "outbreak" were different types of Pseudomonas and so accordingly there was no real outbreak. I called Professor Jones who agreed and the services were re-opened. I asked for an investigation to establish who had made the decision to suspend all of the services because of the perceived outbreak. I don't know what happened about that. I suspected that the ICNs had seen six Pseudomonas cases without realising they were not the same strain of Pseudomonas and so they had triggered the closing of the wards. This is an example of a situation in which the ICNs should have discussed matters with the Lead ICD, who should have checked all of the results to ensure that all of the cases were the same resistant Pseudomonas. The role of the Microbiologist is to ensure that the interpretation of the results is correct. Something clearly went wrong in the decision-making process. In my opinion, this is an example of dysfunction within IPCT at this time, where the relevant checks had not been made. This was a costly incident for patients, staff and GGC as a whole.

2018

Action Plan

150. As mentioned above, after the meeting in October 2017, a 27 point Action Plan was drafted. This Action Plan was supposed to address all of the issues that were

brought up in our SBAR. My recollection is that I received a copy of the Action Plan by email, around the start of 2018. I sat down with Dr Peters and we went through it and noted some inaccuracies with the Action Plan and also the Minutes of the Meeting. We never got to a stage where we had an Action Plan we were able to agree on, although I do accept that sometimes there can't always be full agreement. We were not involved in the development or drafting of the Action Plan and it was presented to us as final. We did spend a lot of time commenting on it, but I don't know whether our comments were accepted or incorporated as I then retired in March 2018. Dr Peters would have a better idea about this.

151. Prior to receipt of the Action Plan, Dr Peters and I were seeking reassurance about what was happening as a result of our SBAR and the meeting that had taken place in October 2017.

152. Once we had the Action Plan and had gone through it, Dr Peters and I were then asking for updates on what was happening with taking the Action Plan forward. There was a particular issue relating to the isolation rooms and the lack of a patient placement policy. We were still being asked about where to place patients on an almost daily basis. We would get some information, perhaps about ventilation, or something that was happening with some of the rooms, but I was never reassured that Senior Management were on top of it all. It was almost as if we were given some information just to try and placate us but nothing substantive was happening.

153. I do not know who had ownership of the Action Plan, although I assume that it was Jennifer Armstrong, or possibly the GGC clinical governance committee. A version of the Action Plan was discussed at an AICC meeting and I have seen the Minutes and the attached Action Plan. Dr Peters and I prepared a detailed document highlighting its shortcomings which I have produced. I have not rehearsed those concerns here for the sake of brevity but I can provide further information if it would assist the Inquiry. Dr Peters would be able to explain the concerns more clearly than me as she has access to the paperwork.

154. I thought the Action Plan would make a difference, but I doubted that it would address all of the problems. I can't speak to what has happened subsequently as I am no longer there.

155. I had had experience in the past of being reassured that there were no problems when in fact there were, so I was wary about simply accepting assurances that the Action Plan would solve everything. I could cite numerous examples of this, but if I had to select one, then I would note that in around 2005/2006 I had been involved in investigating a series of sight-threatening eye infections which had also been seen in a clinic in the community. I was repeatedly told by Estates that there was no issue at all with the ventilation in our eye theatres at the Southern General. I was told you could eat your dinner of the ducting. I said we needed to have that independently verified because of the repeated infections and, ultimately, I had to offer to pay for an external report myself before GGC would agree to investigate. I insisted, in the face of much opposition that the theatres be shut to allow for inspection of the ventilation system and for remedial work, if required, to take place. Finally, an independent expert was engaged and the report they wrote about the theatres was damming and my concerns about the ventilation proved to be correct. The then Clinical Director for surgery and theatres told me that I could rightly say " I told you so".

February 2018 – Stage Two Whistleblowing

156. Dr Peters and I had hoped that our repeated threats to escalate to a Stage 2 Whistleblow would stimulate a bit more action, but they didn't. In February 2018, Dr Peters and I felt that we had no alternative but to go to Stage 2 of the Whistleblowing process. We felt that there were still significant safety concerns affecting patients in the hospital on a day to day basis, and believed that we had a duty to act on those concerns given that we had repeatedly raised them with senior management and did not feel they were being adequately dealt with. This next stage required us to bring

our concerns to an Executive Director of the Board who was trained in the Whistleblowing policy, and we identified Dr Linda de Caestecker, Director of Public Health, for this purpose. By this point, [redacted] had found the whole process so stressful that [redacted] had decided to take a step back.

157. We were not bringing up new issues at Stage 2. The problem was that we were still concerned that enough action had not been taken as a result of Stage 1. I accept that there was an Action Plan and I accept that our concerns were not totally ignored, but not enough was changing at the coalface and I was continually being told by colleagues that there were patients at risk and nothing seemed to be happening. We realised that some issues would require long term planning to fix, but this planning did not seem to be underway.

158. Dr Peters and I were, for the most part, lone voices and we continued to be seen as troublemakers. The culture of bullying meant that people were too afraid to speak out. Many colleagues were not prepared to openly support us, yet they continued to ask us to pass on concerns on their behalf.

159. Once we had decided to go to Stage 2, I contacted Professor Brenda Gibson looking to gain support. I asked her to contact Dr de Caestecker to tell her that she had concerns about what was happening to her patients because I knew that she was concerned. She was a Paediatric Consultant who worked on ward 2A. She emailed me to tell me that she would be unable to do that and that I would have to meet with the whole paediatric team, and get an agreement from them. This was not possible in the time scale before our Stage 2 meeting with Dr de Caestecker. Professor Gibson had asked me to make Dr de Caestecker aware that she had concerns, however I was not prepared to do this as Dr Peters and I had previous experience of passing on someone else's concerns which they then denied they had raised when confronted. Dr Peters and I had been very careful to ensure anything we said could be supported with evidence, so we were unwilling to name colleagues who had raised concerns with us if they were not prepared to go on the record themselves.

160. My understanding is that Professor Gibson later suggested that I asked her for a specific comment about ventilation which she felt unable to provide. This was not what I asked for. She could not be expected to comment or speculate on what the cause of the problems were; that would not have been within her skillset, and we were not ourselves clear as to the cause of the problems. All I wanted was for her to confirm to Dr de Caestecker that she was concerned about her patients, to make it clear that it was not just Dr Peters and me. This whole exchange took place via email. I don't have access to these emails anymore.

161. I emailed the Stage 2 Whistleblow to Dr de Caestecker in February 2018. I don't have a copy of this email but Dr Peters might. I sent a copy of the original SBAR from October 2017 and said that we still had concerns in relation to what was raised in the SBAR and that we would like to move onto Stage 2 of the Whistleblowing process.

162. In response to my email, Dr de Caestecker contacted me and arranged a meeting sometime in March 2018. I cannot recall the specific date but it coincided with the day that I was due to retire. It was attended by both me and Dr Peters and Dr de Caestecker took notes during the meeting. She listened very carefully to our concerns, and we went through the SBAR. She promised she would report back to us and supervise the actions taken. We also asked for our concerns over water and ventilation to be placed on the Risk Register to ensure the non-executive members of the GGC Board were themselves informed over potential risks to patients. It wasn't clear to us that they were aware of the problems we were raising. I continued to be concerned about this. In late 2021 and early 2022 I corresponded with Professor John Brown, Susan Brimelow, and Ian Ritchie about these issues. I received platitudinous letters from them simply stating that they did not share my concerns about the effectiveness of the governance arrangments at GGC, and that they were confident that the hospital provided a safe environment. In my view they were wrong to be satisfied about either the adequacy of the governance arrangements, or the safety of the hospital.

163. Dr de Caestecker did seem to accept in her letter to me and Dr Peters dated 4 May 2018 that the issues we had raised in relation to ventilation in the QEUH and the RHCG should be added to a Risk Register. I don't know if this ever happened.

164. I left the meeting with Dr de Caestecker in March 2018 feeling that she understood our concerns and that we had been listened to and I was hopeful that we might see some improvements. Dr de Caestecker said she would report back to us. I felt that Dr de Caestecker's response was satisfactory. She listened to our concerns, took them seriously and promised to update us. She then provided us with updates in the letters that I have produced. We were treated professionally and with respect.

165. In March 2018 I retired. Thereafter, I received two updates from Dr de Caestecker, one in May 2018 and one in September 2018. The latter followed requests for updates from me in May and July 2018.

166. Dr de Caestecker indicated in her letter of 4 May 2018 that there were plans to recruit an expert in the field of ventilation specifically to look at the issues within the QEUH and RHCG. Her letter of 21 September 2018 confirmed that an appointment had been made. I do not know who that person was. If they were from within GGC or even Scotland, then in my view they will not have been a truly independent expert.

April/May 2018 – Meeting with Anas Sarwar

167. By this point, I had retired but I was regularly seeing stories in the press that led me to believe that the issues that we had raised in the SBAR had still not been resolved. The advice from the GMC and BMA was that if you still had concerns and you had done everything you could within the organisation, then you could raise matters outside the organisation. I phoned the office of the MSP Anas Sarwar who was at that time the Scottish Labour Party spokesman for health. He had featured in some of the press articles that I had read, so I knew that he had an interest in events

at the hospital and some awareness of what had been happening. I asked if he would be interested in meeting with me to discuss matters and he said he would. I told him that I was a doctor, but I didn't give him my name or any specific information.

168. I met with him at his office, and I told him that a Whistleblow had been raised for QEUH and RHCG and that there were concerns over ventilation. I did not give him any other details. At the time of the meeting, I still had not given him my name. On receipt of this general information from me about a Whistleblow having been raised, he submitted a Freedom of Information request to recover specific information. Dr Peters had no involvement in this.

Late 2018 – Press Interest

169. Late in 2018 I was approached on a couple of occasions by the reporter Hannah Rodger from the Sunday Herald. I did not agree to speak to her until 2019. I continued to see reports in the press that I believed were confirming ongoing problems due to the issues we had reported. When I spoke to her, I was very careful to ensure that I did not discuss anything that was not in the public domain.

170. I recall seeing an article in the Sunday Herald stating that an ICM (who I now know to have been Tom Walsh) had been appointed as the GGC project manager to oversee the review and internal investigations. I think this was in response to the Independent Review. This ICM would presumably brief the press and control information given out by GGC. This meant that the GGC IPCT were investigating their own service, without any outside challenge, which looked rather like marking your own homework. I could not believe that any person or organisation involved in the decision-making process for the building specifications, commissioning or addressing the problems since the opening of the hospital could objectively oversee the review and investigation.

May 2018 – Response to Stage Two Whistleblowing

171. In addition to Dr de Caestecker's letters, I have also seen a Whistleblowing Report by Dr de Caestecker dated May 2018 which was shown to me by the Hospitals Inquiry team. It was not sent to me at the time of the Stage 2 Whistleblow which I believe is contrary to the Whistleblowing policy. This report contains more information than had been included in the letters of 4 May and 21 September 2018. I was never given the opportunity to review it for accuracy. I don't believe Dr Peters was either.

172. There are five points which are noted as the main points of the complaint in part 1 of the document. The five points do not cover everything that we discussed with Dr de Caestecker; we spoke to her about all of the issues in the original SBAR. The report contains factual inaccuracies. By way of an example, I can see one on the first page: "*During this time there were changes in the lead ICD as Dr Craig Williams left, TI resigned and CP took over and tried to change the whole IC structure and she resigned".* This is wrong. Dr Peters was never the Lead ICD, she never even applied for the post. She therefore could not possibly have resigned from the role.

173. I would also comment on the last sentence under heading number 4 where it notes that "*The RHC changes are now complete and the QEUH adaptations and new rooms are on schedule to be in place by end of October 2018".* I don't think this happened, because in September 2018 the patients were moved out of ward 2A to the adult hospital.

174. On the next page there is a note that "*The risk in aerosol generating procedures is reduced by advising to keep FFP masks on whilst in the room and for a period of time after end of procedure…*". I don't know if that is accurate from a microbiology perspective.

175. On that same page, there is mention of the expert in ventilation who has been recruited specifically to look at ventilation in the QEUH and RHGC. I suppose this is the expert who was referred to in the letters from Dr de Caestecker. I don't know who this was or what their conclusions were.

176. The Report also mentions on the same page that HIS were involved with investigating the sewage ingress in the neurosurgical building and were satisfied with the measures taken and the progress being made. It refers to November 2017. I am not clear why it took so long when I believe Dr Peters first raised this issue in 2015. I wonder whether HIS had been contacted because of our Step 1 Whistleblow. They should have been asked before when Dr Peters first raised the concerns.

177. The next paragraph on that page addresses the concerns we had about infection levels. Once again it states that there were no increased levels of infection and cites the national prevalence study. As I have already explained, given that they were not measuring everything, they could not safely conclude that there was no increase.

178. I take issue with the next part of the Report. At the bottom of that same page there is a section on our concerns that we were not being kept updated and the response is as follows:

"I heard an unfortunate but consistent circumstance about the situation summarised below:

- *Dr Peters is very knowledgeable about infection control including ventilation. She finds it difficult to accept balance of risk (e.g. if theatres or wards need to close, patients may be put at greater risk)*
- *She is no longer an infection control doctor having resigned from this role*
- *She does not accept being part of team and listening to views of others*
- *She does not accept that infection control is a nurse led service*

• She sends frequent requests for updates which are not directly relevant to her role

• She has caused great anxiety to colleagues by her styles of communication particularly the persistent stream of emails to the IC team and to TI…"

179. In relation to the first point, I think this relates to Dr Peters suggesting that wards should be shut due to an infection risk and the hospital saying there was a risk to patients in closing the ward. That is a problem that you come across as an ICD. The defence unions advise us that a microbiologist has to give their advice based on their knowledge and what they perceive to be the risk and the clinician can overrule that if they feel the balance of risk favours keeping a ward open. An ICD finds themselves in that position quite often and it is a risk assessment as to what should happen. There is often disagreement and the clinicians and management put the IPCT under pressure so that they cannot be criticised for overruling the advice of IPCT.

180. I do not agree with the third point that she cannot accept being part of a team or listen to the views of others. I think we all sometimes find it difficult to listen to the views of others when we don't agree with them, but GGC were not able to manage competing views in a way that was conducive to constructive discussion. That's where I felt there were big problems and there should have been an external expert to mediate. We really reached a stage where we were saying one thing and others were saying a completely different thing, for example that there was no issue with infection rates, and we reached an impasse. I think it is unfair to target Dr Peters. She was not the only one raising these concerns, there were lots of other people who agreed with her, they just were not all prepared to speak up. Her concerns were raised by others and regularly raised at consultant meetings. I don't think that it is fair to say that she wouldn't listen to other people's views. Both of us stated numerous times that we would have been prepared to accept we were wrong if there was evidence contrary to what we were saying. I have not seen any evidence to suggest that we were not right about most, if not all, of the concerns that we were raising.

181. In relation to the fourth point, I don't think IPC should be nurse led, but I recognise that this Inquiry is not the forum in which the correctness or otherwise of that approach is going to be resolved. This factor is, however, relevant because it contributed to the breakdown of "team" working in IPC within GGC due to the desire of ICNs to work autonomously.

182. In relation to the fifth point, I would have thought that, in order for her to carry out her role as a Microbiologist, Dr Peters would need updates on what was happening with all of the concerns that she was raising and I do not think it was unreasonable for her to seek reassurance. All of the Microbiologists should be given reassurances and be briefed on what the main infection control issues are. This enables them to keep IPCT updated and receive a response or reassurance about the concerns they were raising. They also need to keep IPCT informed of new issued and updated on ongoing issues.

183. I don't know how many emails she was sending so I cannot comment on whether it was an unreasonable amount or not. I would assume that part of the volume of email correspondence was generated by her not receiving a reply at all, or a satisfactory answer to queries and, therefore, feeling compelled to escalate or repeat the query that had gone unanswered.

184. Overall, I would say that the comments about Dr Peters are unfairly derogatory. There are lots of people who would defend her ability and her willingness to put herself out for other people. Many of her colleagues do not have a problem with her, and in fact have a huge amount of respect for her and will say that she is very approachable, very good to work with and that she did work well as part of a team. There are clinicians and laboratory staff who would support this view. I think that it is utterly wrong that she has not had the chance to challenge what is said about her in the report and I fundamentally disagree with the conclusions reached.

185. The report concludes that the concerns raised in the Whistleblow are legitimate, but are being dealt with by the Action Plan. It also concludes that, as Dr Peters was not an ICD, she did not need to know everything that was happening on a day-to-day basis and should not repeatedly email asking for updates. I would argue that all Microbiologists need to know about issues that impact on our ability to do our job, both during the day and out of hours. If we are not aware of the status of ongoing issues or concerns, then we cannot ensure that the IPCT are kept fully informed.

186. The other recommendation that I would comment on is that there was to be a follow up in six months and the issues raised in the Whistleblow were to be added to the Risk Register. I don't know if either of those things were done. I also felt that it was important for the individuals on the GGC Board to be briefed about the concerns that we were raising. The SMT and Clinical Governance Committees take decisions on what information is discussed at meetings of the full board. I wonder if all of the members of the board, particularly the non-executive members, had been briefed about the concerns of the whistleblowers things would have been managed differently and going outside the organisation could have been avoided.

2019

February 2019 – Establishment of Independent Review

187. I prepared a detailed document for the Independent Review outlining the questions I felt needed to be asked and answered. It was supported by the Standards that applied at the planning stages of the project. I attended an interview with the Independent Review team which was a challenging experience for me, even though I had the support of a friend with experience of the NHS and a legal background.

188. I believe that the Independent Reviewers had already listened to a very negative picture of the Whistleblowers from GGC and started the Independent Review with a biased opinion of us. The two reviewers' opening remarks to me were criticism

for causing stress and upset by doing what I had done. There were factual inaccuracies in the final report that were not corrected.

February 2019 - HPS report

189. The HPS report in February 2019 prompted me to write to the Health and Sports Committee, who were requesting statements about QEUH and RHCG. There were two other anonymised submissions to the Committee, clearly from professional Microbiologists raising even more detailed concerns than the ones I raised when drafting the SBAR. I wanted to make it clear that I thought that HPS should have looked further back than 2018 when carrying out their data analysis on organisms. I also wanted to make it clear to the Health and Sports Committee what I thought the Independent Review should be looking at. I mentioned the Whistleblow and the SBAR and I mentioned the concerns I had about the ICM being made a GGC project manager in relation to the Independent Review. I raised the point that I did not want the Review to be a whitewash.

Meetings with Jeane Freeman

190. Dr Peters and I met with Jeane Freeman twice during 2019. The first meeting took place in the Spring. I attended along with Dr Peters and Anas Sarwar. We gave Ms Freeman an outline of our concerns and the events before and after our whistle blow in September 2017. We met her again in December 2019 at the Scottish Government after Dr Peters and I met with Professor Fiona McQueen. When the meeting with Fiona McQueen finished, we all went and had a further meeting with Ms Freeman. She listened attentively to our concerns. She thanked us for having the courage to speak up. I believe that she was concerned about what we were reporting. I think this played a part in her asking for an Independent Review, Public Inquiry and putting GGC under Special Measures.

November 2019 – Stage Three Whistleblow

191. Throughout 2018 and 2019 I continued to see reports in the media about the issues within QEUH and RHCG. In November 2019 I saw a press release from GGC that stated that because no tests were done at the time, it was not possible to conclude that infections were connected to the water supply, and criticising the "extremely disappointing" actions of a whistle-blower who had suggested that that there was a link with the water. I was not the whistle blower on this occasion. I knew that [redacted] had asked IPCT and Estates for enhanced water sampling to be done because [redacted] believed that a link to the water needed to be excluded as far back as the summer of 2017. I do not believe that [redacted] would have talked to the press either. There was a feeling that clinical staff were responsible for going to the press, but it was always assumed that it was one of the original whistle blowers. I thought the press release was in danger of being misleading because it clearly created the impression that there had been no suggestion at the time of a need to test the water. A second press release later the same month mentioned possible links between the water supply and infections in 2018, but again failed to mention that in fact the connection was potentially made in 2017.

192. I also raised concerns about: (i) GGC doing their own investigations and reporting to the Independent Review, (ii) the HPS report previously mentioned, and (iii) the fact that their most experienced ICDs were no longer working as ICDs and this was a risk to patients.

193. As a result of this misinformation by GGC and the continuing issues at QEUH and RHCG, I decided to continue with the Whistleblow and to move to Stage 3. I discovered that there was a slightly different process in place for Whistleblowing by that stage so I submitted an email to Jennifer Haynes, who was GGC's Complaints Manager, on 21 November 2019. In that email I highlighted that there had been an inaccurate press statement released by GGC which had omitted that Stage 1 of the previous Whistleblow had included the fact that an ICD had requested enhanced

water testing in 2017 because of a concern that the water may have been linked to infections. Stage 3 related to the original SBAR which mentioned an inaccuracy in a press statement. The original SBAR raised concerns about inaccuracies in a press statement about ventilation in the paediatric BMT Unit. This wasn't necessarily a situation where it was a risk to patient safety and care but I thought it would cause distress to families if they later found out the information was inaccurate.

Meeting with William Edwards and Ian Ritchie on 4 December 2019

194. I met with William Edwards, a Board Executive and Ian Ritchie, a Non-Executive Director who had a clinical governance role (as a retired clinician) on 4 December 2019 to discuss Stage 3. It was a difficult meeting as neither of them had made themselves aware of Stage 1 or Stage 2 of the Whistleblow. As a result, we ended up discussing issues that I had not actually raised in the Stage 3 Whistleblow. I was then sent an email dated 23 January 2020 from Jennifer Haynes which summarises what we had discussed at this meeting. This email also attached the minutes of the meeting. We discussed the following points and actions arising from them:

i. Factual inaccuracies regarding water testing. In particular there had been a report in the media that water testing had not been required and I knew that to be inaccurate. The action arising was that Mr Edwards and Mr Ritchie were going to investigate if supporting evidence existed around the water testing being carried out in summer 2017 and beyond.

ii. The planning stages of the new QEUH/RHCG and the involvement of the IPC staff. My concern was that despite the initial involvement in the planning stages, the subsequent reduction in IPC input may have had a negative impact on the final building, particularly in relation to the ventilation. The action arising was that Mr Edwards and Mr Ritchie were going to investigate

if actions had been taken to address the ventilation as a result of the SBAR in 2017.

iii. Cryptococcus and the concerns about the plant room and that it may have been tested after any mess caused by the pigeons had been cleaned. The action arising was that Mr Edwards and Mr Ritchie were to gather further information about the plant room, any associated testing and the review carried out relating to the reported pigeon fouling problems.

iv. The data considered by HPS/HFS regarding the infection rates at the QEUH/RHCG and my concerns that they did not include the infections from 2016/2017 which made the review inaccurate.

v. Bullying and working culture, particularly in relation to the IPCT and Microbiology. ICDs had been resigning due to bullying, their expertise was not being listened to and they were being put under pressure to sign off on issues where they had not been provided with the appropriate evidence to allow them to do so. The action arising was that Mr Edwards and Mr Ritchie asked me to provide some further evidence and encourage other people to speak to them so that they could carry out a more detailed review.

vi. The last action was that I would get some further information about the SBAR of 2017 and the resulting 27-point Action Plan.

195. During the meeting I also pointed out that if the errors in the press releases became public in the future, it would cause more distress to families, and I believed it was important for GGC to rebuild confidence with the public. I did not inform the press of the inaccuracies.

196. Fundamentally, the culmination of this process was that they wanted me to sign off an approval that everything raised in the Action Plan had been dealt with. I

was not willing to do that because I no longer worked there and so I did not know the full details of what had been done. I said they would need to speak to [redacted] and Dr Peters. They did not want to do that and asked me to speak to Dr Peters and [redacted] to relay the information to them. I was not prepared to do that and I felt that they needed to speak to Dr Peters and/or [redacted] themselves. They said they would not do that because they thought it would be seen as bullying unless they came forward themselves. I did speak to Dr Peters, as a last resort, and she felt she had raised the issues on numerous occasions with GGC and that they should approach her.

2020

29 January 2020 Meeting re Stage 3 Whistleblowing

197. The Actions above were agreed and a further meeting was scheduled for 29 January 2020. In the meantime, I got the email dated 23 January from Jennifer Haynes which I have already mentioned, which attached the minutes of the meeting along with minutes of a Clinical and Care Governance Meeting dated 5 December 2017 which had the 27 point Action Plan attached and further minutes from the Clinical Care and Governance meetings in March and June 2019 which provided updates on the progress of each action in the Action Plan. The email mentions that Dr Inkster had asked for there to be changes made in the March minutes and these were agreed in June. Mr Ritchie also asked if colleagues were reassured by the actions that had been taken and Dr Inkster advised that "one colleague had since retired; other colleagues had not raised any further issues with her". I don't know if that was correct or not.

198. On 29 January 2020, I attended the scheduled meeting with Jennifer Haynes, Ian Ritchie, William Edwards, Dr Scott Davidson (a Medical Director) and Tom Steele, Director of Estates and Facilities. I attended along with Lorna MacGregor. During that meeting, I was provided with various updates in relation to the issues that had arisen as a result of the Whistleblow and our meeting on 4 December 2019. I was informed

that I would receive a copy of the Action Plan and a timeline in relation to the water testing. I wanted to know if the water supply had been treated prior to it being tested as I am aware that they had found Stenotrophomonas in it. We also discussed the ventilation, chilled beams and Cryptococcus.

199. I also raised concerns I had over a further press statement released by GGC concerning the water supply, which I felt was inaccurate. As outlined above, GGC stated that the appropriate water testing could not be undertaken as they had to wait for an SOP to be drawn up. When I challenged this at the meeting on 29 January 2020, it was agreed that it could have been done at the Royal Infirmary or commissioned by an outside Laboratory if it was specifically requested. This enhanced testing is what [redacted], in [redacted] capacity as ICD, had requested in 2017. This press statement came out after I had the first meeting on 4 December and I raised it at the meeting of 29 January 2020, but this does not feature in the minutes. Their position was that they had to rely on the information that they were being given; I suggested that on occasion they might need to question some of that information.

200. Following on from this meeting on 29 January 2020 I received a final report detailing the outcome of my Stage 3 Whistleblow. The report covered the following points:

i. Culture and bullying: From the actions agreed at the meeting on 4 December 2019, Mr Ian Ritchie began looking at the bullying culture within GGC and said he was keen to address this. He spoke with Professor Marion Bain who planned to get some external advice on the cultural issues within the IPC and Microbiology teams within GGC. It resulted in a review of the culture within Microbiology and IPCT by organisational development, with the support of an external professional. I had the opportunity to be interviewed and had the findings presented to me by Dr Angela Wallace. I was not allowed to see the report itself. Some of ICNs would not take part in the review, but they were happy to say things had improved once the follow up review was done. Some of the ICDs and

microbiologists initially participated but then became frustrated and were no longer involved by the point of the follow up review. The conclusion was that things had improved despite the fact that the ICDs, who raised concerns in the first interviews, did not participate in the follow up and the ICNs had not participated initially. I pointed out that they needed to understand why the staff with the most concerns had not contributed to the second part of the review. HR and OD had previously undertaken an investigation about the bullying culture in Microbiology, when dozens of staff including BMS and medical staff were interviewed anonymously. They were too intimidated to do this even as a group. This was when the HR manager told me that that the situation was like an abusive marriage. No-one was allowed to see a report following this investigation.

ii. Factual inaccuracies in media statements regarding water testing: The report found that there had been water testing carried out in September 2017, after the Step 1 Whistleblow, that looked for Stenotrophomonas. The report accepted that it was regrettable that the media line that was issued implied that GGC did not test the water for Stenotrophomonas. It was true that there was no requirement to test for Stenotrophomonas, but a request was made and actioned for testing and no Stenotrophomonas was found. When this was discussed at the meeting I challenged whether the testing was done before or after they had purged the system with chlorine dioxide and they told me it was before but I think more questions need to be asked about what treatment had been undertaken before the water was tested and whether the relevant water outlets were tested. It is essential to test all the outlets that might be relevant to the possible problems, otherwise you cannot say the water is clear. Also you have to test water before treating the system, or you cannot say it was negative before the test. Dr Peters will be able to provide further information about this.

iii. Issues with the new QEUH/RHCG: I raised my concerns about the air changes being 3 instead of 6 and the report found that the IPC team had considered this and pathways were put in place for very high risk pathogens such as MERS, these patients would then have to be moved to another hospital, possibly out with GGC's geographical area.

iv. The most recent iteration of the Action Plan, dated February 2019 was made available to me. I am not sure why it had not been updated since February 2019. I would have expected it to be updated every few months.

v. I had raised an issue about Microbiologists not having information to advise clinical staff about where to put immunocompromised patients. The report stated that guidance had been provided to Microbiologists and clinicians. As I am no longer a practising Microbiologist, I do not know the up to date position.

vi. I also raised concerns about the chilled beams and the potential risk of environmental infections. The report stated that chilled beams were acceptable, according to SHTM 03-01, but that Tom Steele had confirmed that chilled beams would not be used in the newly refurbished ward 2A. This seemed to me to be contradictory.

vii. Cryptococcus, which was discussed at the meeting, had never been isolated from the plant room. It should be noted that it is very difficult to isolate Cryptococcus from the environment. I asked if samples had been taken prior to the cleaning of the plant room and I was told that they had not. It seems obvious that you cannot assume that Cryptococcus had never been in the plant room if you have not sampled it prior to cleaning. It was positive news that Cryptococcus had not been found after cleaning, but that does not eliminate the plant room as a historic source. I can understand why sampling was not done prior to cleaning as cleaning would be a priority and there was urgency in addressing a high-risk situation.

However, you cannot claim that Cryptococcus was never there if you do not test for it before cleaning. With hindsight, I should have asked whether the plant room supplied air to the ward where the adult patient with Cryptococcus was cared for as that is significant in understanding what happened. This is a rare infection and to identify two cases in a very short period of time is unusual. It is possible that there were more cases, as it might not have been looked for in the laboratory or specimens may never have been sent from the wards.

viii. Data used by HFS/HPS in their review of infection rates. The report concluded that there was no evidence that GGC presented any false data and all relevant data was shared.

201. When I received the final report I was concerned that there were a lot of inaccuracies in what had been written. I wrote to the reviewers and highlighted inaccuracies, and they refused to change anything in the report. I wrote to the Chair of the Board, Professor John Brown, to alert him to my concerns. I have produced this letter and I have not repeated the concerns here for the sake of brevity. I can provide further information on this if it would assist the Inquiry. Mr Ritchie and Mr Edwards thanked me for my courage in bringing my concerns forward, especially as I had made it clear that these matters had impacted on me significantly and that my motivation was patient safety.

202. I asked for the report with my suggested amendments to be shared with Dr Peters, [redacted] and Dr Inkster so that they could also make any comments they wished about the accuracy of the report. I never saw their responses as I did not think it would have been appropriate, but I understand that they did submit detailed responses. Part of the reason I wanted to do this was because, as part of the Stage 3 process, Mr Edwards and Mr Ritchie wanted me to confirm that I was happy that everything in the Action Plan had been completed. I refused to do that as I had no

idea. I didn't work for GGC anymore and it might have been be a breach of confidentiality for ex-colleagues to discuss anything with me.

203. After repeated emails with Jennifer Haines, Professor Brown (Chairman) and Elaine Vanhegan (Head of Corporate Governance and Administration), I was told that the original Report would not be changed to correct the inaccuracies I had highlighted as they did not materially change the outcome or the recommendations. I don't disagree with that but I was surprised that GGC were prepared to have a document in place that was factually inaccurate.

204. Professor Brown did say that the amendments I had proposed would be part of the permanent record and would be made available to anybody reviewing the case. I received a letter to this effect. However, when I spoke to the Whistleblowing reviewer, as part of the Whistleblow audit that I was later involved in, I asked my interviewer if they had seen the report with all of the comments and he said he had not. I accept that the final report was not amended, but I had been given assurances that my comments would be made available to anyone reviewing it, including this Inquiry, and that was not done. The documents raising concerns about the final report were not even shown to the whistleblowing reviewers. This is just another example of GGC not providing the full picture to an official external reviewer.

February 2020

205. Around this time, I agreed to appear in the BBC Scotland Disclosure program about the hospital. We filmed the program shortly before lockdown but it wasn't shown immediately because of the intervening COVID-19 pandemic. I was attacked and accused of not having considered the anxieties of patients and families in deciding to publicise our concerns. This was something we considered very carefully and it was a significant source of concern to us. Ultimately, we felt that we had no choice but to publicise our concerns with the media. We were aware that there would be a public inquiry in the future but we did not expect that it would provide quick solutions to the

problems and, in fact, given that another four years has passed in the interim, that expectation proved to be correct.

April 2020

206. In his email to me dated 23 January 2020, Mr Ritchie indicated that the original SBAR had not been identified as a Stage 1 Whistleblow. The Independent Review was also going on around that time and when I had been speaking to them they did not seem to appreciate there had been a Stage 1. Ultimately, I came to the view that there had been an attempt by GGC to cover up the Stage 1. This led me to raise another stage 3 Whistleblow highlighting this concern.

207. One of the non-executive directors, Mr Ritchie, who had been present at the meetings with Jennifer Haynes and I, contacted me and tried to talk me out of raising this second Stage 3 Whistleblow. I told him that I believed there had been a cover-up of the Stage 1 I had raised and he asked me if I had any idea what the consequences would be for someone if that was the case. I had to argue vigorously to demonstrate that the concerns we raised in the October 2017 SBAR were a Stage 1 Whistleblow and explained the exact process we had followed. He continued to try and discourage me from raising this, asking me what I wanted or if there was anything they could do to stop me raising it. I told him there was nothing they could do and that I didn't want anything except to see the matter investigated.

208. This Stage 3 was investigated by Allan MacLeod, a Non-Executive Director. He told me the implications if proven would be very significant for any individual who had covered it up. We had a telephone meeting and he listened to my concerns. He then issued a final report which I saw a copy of. Whilst he did find that there was nothing in the Whistleblowing records noting that the SBAR in October 2017 was a Stage 1 Whistleblow, he did conclude that because the circumstances of the SBAR were discussed at a meeting, and because Dr Peters and I indicated our intention to escalate to a Stage 2, that inferred that our initial concerns had been a Stage 1 but that there

was no evidence that there was any deliberate attempt to cover up the fact that the initial raising of concerns was done under the Whistleblowing policy. I asked him to ensure that GGC were told that the Action Plan had arisen as a result of a Stage 1 Whistleblow. I thought that both GGC's executive and non executive board members should know. It was been pointed out that I had been involved in whistleblowing since 2015, even though this was not the formal process we started in September 2017. I do not know if this was ever done, but as stated before, I thought all of the members of the GGC board should know.

209. Along with Dr Peters and Dr Inkster, I was asked to contribute to the Oversight Board established by Jeane Freeman and when we read the report and the timeline we noted that there was nothing about the Stage 1 Whistleblow in that either. We asked for it be added in and it was, which I was grateful for. There were a lot of other factual corrections that I identified and these were corrected as well.

210. My view is that the failure to acknowledge the October 2017 SBAR as a Whistleblow reflects an unwillingness to embrace the importance of the whistle blowing policy and take our concerns seriously. The later audit of the whistle blowing process clearly demonstrated the lack of knowledge about the policy, even by the managers within GGC and acknowledged that the whistle blowing process had not been a positive experience for many of the whistleblowers, managers and others involved.

Conclusions

211. I absolutely acknowledge that none of the difficulties experienced by me and my colleagues can compare to what was experienced by some of the patients and their families. However, my involvement in the events described in this statement has been extremely difficult. I have tried to do what I believed was right, and in the best

interests of the patients and families to whom I owe a duty of care, and at times I have been made to pay a very heavy price for that.

212. During the whole process, there was no recognition or understanding of the stress experienced by the Whistleblowers. We were treated as troublemakers throughout. I thought of giving up on several occasions. I promised my family that I would give up after stress resulted in my admission to coronary care in April 2019. This is a promise I later broke because I found it more stressful to stand back and do nothing, given the harm I believed had been and was being caused. I took a Hippocratic oath which includes '*Taking prompt action if you think patient safety is being compromised'*. This is what I believe I was doing.

213. I did not expect to start my retirement being involved in an Independent Review, a Public Inquiry or a Police investigation. It has taken a huge toll on my health, and on my family and I have committed enormous amounts of my time to these processes during what is meant to be my retirement and when family commitments mean there are multiple other competing pressures on my time. I continued to cooperate with everything asked of me and continued to keep on top of the problems even during treatment for cancer in the summer of 2018.

214. I have had to have private counselling, and I have suffered from stress, insomnia, and anxiety. I have also had heart problems with an admission to coronary care as noted above, and also a visit to Accident and Emergency with a heart arrhythmia. I have been started on anti-coagulants, which has seriously impacted on my life and my ability to ski and scuba-dive. On both occasions, stress was felt to be the cause. I feel this stress was caused by all of the pressures relating to my whistleblowing, and the need to at least try and drive changes to improve patient safety. My family asked me to stop and I agreed to, but then I realised that stopping and worrying about what the patients had suffered and might suffer in the future was more stressful than stepping away from this process. It is my belief that there would never have been an Independent Review or in fact this Inquiry if Whistleblowers had not continued to report problems and gone public. Maybe this is the only way future

problems and incidents will be minimised and lessons learnt for the NHS across Scotland.

Scottish Hospitals Inquiry
Witness Statement of Questions and Responses
Phyllis Urquhart

This statement was produced by the process of sending the witness a questionnaire with an introduction followed by a series of questions and spaces for answers. The introduction, questions and answers are produced within the statement.

Personal Details

1. Name, qualifications, chronological professional history, specialism etc – please provide an up-to-date CV to assist with answering this question.

A Phyllis Urquhart,
Glasgow Caledonian University, City Campus, Cowcadden Road, Glasgow
MSc Energy and Environmental Management 2001 – 2003
BSc in Building Control (2nd Class Hons) 1995 – 1997
Glasgow College of Building and Printing, 60 North Hanover Street, Glasgow
Advanced Diploma in Building Control 1993 - 1995
Higher National Certificate in Building Control 1991 – 1992
Glasgow Polytechnic, 70 Cowcadden Road, Glasgow
Higher National Certificate in Public Administration 1990 – 1992
Reid Kerr College, Renfrew Road, Paisley
Scottish National Certificate in Secretarial Studies 1980 – 1984
Scottish Certificate in Word Processing
Scottish Certificate in Office Skills
Business Information Course (Accounts)
Scot Bec Typing and Shorthand I & IIRSA Typing (75wpm) and Shorthand (120wpm),
NHS Training
Legionellosis :Water Systems Refresher Update WH007 26 March 2023
Disinfection Control Training Course 25 March 2022

Leadership Training commenced April 2015BOHS P405 Management of Asbestos in Buildings May 2013
Asbestos Awareness Training 2015
Legionella Hot and Cold Systems June 2013
Infection Control Training 2015
Datix Training 2013,
Current & Previous Institute Membership
The Emergency Planning Society
Royal Institute of Chartered Surveyors
Institute of Occupational Safety and Health, Subject: Water System.

Professional Background

2. Professional role(s) within the NHS.

A Current employment: 10/01/23-Present Estates Department, Larchgrove, Dykebar Hospital, Grahamston Road, Paisley PA2 7DEPost: Site Manager Operational Estates – Duties include overall site supervision and responsibility of 2 hospitals being Dykebar and Leverndale and 36 Health and Social Care Partnerships (HSCP). Supervision of 30 staff and associated compliance across all SCART topics. Supervision and delivery of refurbishment projects across the HSCP sites and management of enabling works across capital projects, human resources management, FM First management, health and safety management, asbestos management, management of healthcare engineering installations, etc. Member of the Scottish Legionella Forums Group, development and delivery of electronic little used outlet project across HSCP and acute sites, responsibility for all aspects of fire safety across all sites and processing of all risk assessments and associated actions across all topics, budget holder responsibility, etc.

3. Professional role(s) at QEUH/RHC, including dates when role(s) was occupied.

A 01/11/2017 – 01/01/2022 Queen Elizabeth University Hospital, Facilities Corporate Services Department, Central Medical Block, Glasgow G51

4TFPost: Compliance Manager – Duties include provision of technical managerial support and guidance support in meeting the Scottish Governments Legislative and Statutory Compliance, improving compliance and associated action plans across the Greater Glasgow and Clyde Sector. Working across 186 sites consisting of 8 Acute sites and the remainder are partnerships. Responsibilities include supporting improvement, performance reporting, awareness raising and ownership, partnership working, attendance at Acute and Partnership Water Groups, National Water Group, etc. 16/07/12 – 31/10/2017 Estates, Facilities Department, Gartnavel General Hospital, 1053 Great Western Road, Glasgow G12 OYNPost: Senior Hospital Estates Manager – Duties include acting as Senior Operations manager to contribute to the forward planning, development and implementation of effective and efficient maintenance policies to satisfy conflicting user requirements, management of hot and cold water systems, asbestos management, health and safety management, management of the operational estates financial, human and physical resources in a professional, cost-effective and efficient manner through the use of maintenance and special contractors and direct labour force. Responsibility for the management of complex healthcare engineering installations. Ensuring that statutory insurance inspections are carried out, experience of taking the lead where delegated in management and coordination of feasibility studies and project implementation for a range of projects. Maintenance of records which are required to meet the needs of statutory bodies, the legal department, planning and building warrant compliance. Responsibility of in-house design of minor capital and backlog projects including the preparation of CAD drawings and specifications to obtain statutory approvals. Responsibility for the preparation and evaluation of tender documents and thereafter supervising the works to completion. Representation of client's interests by active participation at prestart, site progress, commissioning and handover meetings. Autonomy to make decisions on issues such as the allocation of resources to assist during connections to critical services, the timing of such connections, the acceptance or rejection of workmanship and equipment, etc. Supporting the Sector Estates Manager in compilation of specialist technical information for external design consultants on major capital projects. Carrying out surveys to

appraise the condition of the assets and to review and improve estate performance. Provision of cost information to service managers to allow the preparation of business cases for projects. Management of HR issues, through NHSiS PIN guidelines, such as recruitment, discipline, absence management, grievances and staff training in line with NHS HR Policies. Processing training needs of staff and ensuring that agreed training protocols are implemented and that records of training outcomes are kept, including provision of new shared drive for local record purposes. Raising of orders as dictated by the department in providing a maintenance service to the hospitals ensuring compliance with the Standing Financial Instructions. Identification of user needs and provision of budget costs for proposed department and service changes. Responsibility for carrying out investigation following submission of IR1 forms and identifying remedial action to prevent reoccurrence. Promotion of a quality assurance culture to encourage continuous improvement in the delivery of Estates Services. Active participation in the investigation and implementation of an energy saving programme to reduce the hospital's energy expenditure. Member of the major incident team responsible for coordinating the Estates response in emergencies such as loss of power supply, flood, fire, etc. In conclusion I analyse and respond to legal documents concerning claims against the hospital and NHS in respect of Estates matters, etc.

4. Area(s) of the hospital in which you worked/work.

A Previously worked across 186 sites consisting of 8 Acute sites and the remainder are partnerships.

5. Role and responsibilities within the above area(s)

A Compliance Manager - Duties include provision of technical managerial support and guidance support in meeting the Scottish Governments Legislative and Statutory Compliance, improving compliance and associated action plans across the Greater Glasgow and Clyde Sector. Working across 186 sites consisting of 8 Acute sites and the remainder are partnerships. Responsibilities include supporting improvement, performance reporting,

awareness raising and ownership, partnership working, attendance at Acute and Partnership Water Groups, National Water Group, etc.

6. Who did you report to? Did the person(s) you reported to change over time? If so, how and when did it change?

A Reported to Alan Gallacher, other than a period of approximately three weeks after I produced an Audit of the QEUH when I was then informed that my Manager would change from Alan Gallacher to Ian Powrie.

7. Who selected you for your role(s)? When were you selected for your role(s)? Please describe the selection process for appointment to this/these roles?

A Alan Gallacher and Mary-Anne Kane, selected July 2012, selection process interviews held at QEUH via Alan Gallacher and Mary-Anne Kane.

8. Had you worked with any of your QEUH/RHC estates and management colleagues before your role there? If so, who had you worked with before your role there? When did you work with this/these colleague(s)? What role were you in when you worked with this/these colleague(s)? How long were you colleagues in this/these previous role(s)?

A No, I had not worked with any QEUH/RHC estates and management colleagues before my role there. Working with QEUH colleagues when I started from July 2012. The role was Compliance Manager. There was a significant turnover of colleagues in the roles for short periods, with the exception of Ian Powrie who had been in the NHS since being an Apprentice.

9. What roles have you occupied since leaving QEUH?

A Site Manager Operational Estates across Partnership sites being Dykebar and Leverndale Hospitals and associated health centres/clinic sites under both these sites.

10. What, if any, professional bodies did you belong to when working at QEUH? Were they relevant to your roles there?

A The Emergency Planning Society, Royal Institute of Chartered Surveyors and Institute of Occupational Safety and Health. Yes these were relevant to my role.

Taking on the Role at QEUH/ RHC

11. When did you start at QEUH?

A I started, for record purposes on 16th July 2012 as I had been continuing to cover my previous operational estates role at Gartnavel General Hospital for part of the day, e.g. am and the other part of the day, e.g. pm in the Compliance role.

12. What was your role before moving to work at QEUH?

A Senior Hospital Estates Manager.

13. Did that role enable you to gain an understanding of QEUH before starting there?

A Yes

14. What were your impressions of QEUH before starting there?

A Greater Glasgow and Clyde's Flag Ship.

15. What, if any, challenges, did you anticipate you might encounter when you started at QEUH?

A Challenges/risks in respect of the size of the building and challenges with ensuring staff worked with me to create a safe environment and ensure public safety.

16. What challenges did you encounter upon starting? Were those greater or lesser than you had anticipated?

A Challenges associated with having a significant lack of staff to fulfil the roles and also suitably experience staff to deliver.

17. How did you address them, and to what effect?

A Highlighted concerns to my Senior, Authorising Engineer, worked with the operational and Managers appointment and tried to guide and assist and produced Audits in terms of water systems of the QEUH.

18. Please describe your role at QEUH. What was your job title? What did you understand that your responsibilities would be, including your day-to-day responsibilities?

A Job title, role and responsibilities as follows:-

NHS GREATER GLASGOW AND CLYDEJOB DESCRIPTION

1. JOB IDENTIFICATION

Job Title: Compliance Manager

Responsible to: Head of Corporate Estates Department(s): Board wide role Partnerships/CH(C)P's:

Links to all Acute, Mental Health Partnership and HS(C)Ps

2. JOB PURPOSE

The post holder will be responsible to the Head of Corporate Estates and will play a key role in developing and delivering initiatives, tools, reports and technical managerial guidance to support NHSGG&C in meeting the Scottish Governments Legislative and Statutory Compliance (i.e. SCART) expectations of public sector bodies generally and NHS Scotland mandatory requirements and policy commitments specifically. This will also include working to achieve the change and improvement agenda for Compliance and ensure delivery of the outcomes of Action Plans put in place to deliver same. The post holder will manage key elements of Legislative and Statutory Compliance (SCART) programme across the Greater Glasgow and Clyde area, through the development of specific smaller action plans and audits with clear outcomes and programmes of work. Success requires working with Directors and senior managers across the organisation to develop and

implement work programmes. The postholder will provide expert advice to NHSGGC on interpretation of Compliance data and trends, evidence based practice and national policy, along with developing and delivering initiatives, tools, reports and technical and managerial guidance to support and meeting of Scottish Government's Compliance expectations. The post holder will provide specialist support to colleagues and partners, including workstream management and project management to achieve Compliance outcomes. The post holder will provide support and advice, where required, to other Senior Managers within GG&C and out with the estates field of expertise in Legislative and Statutory Compliance issues. These key elements of Compliance will be assigned to each Compliance Manager by the Head of Corporate Estates and will be dependent on the knowledge, skills and specialism of the individual manager concerned and will be drawn from the NSS HFS SCART Topics, a sample of which are listed below.

3. ORGANISATIONAL POSITION

4. SCOPE AND RANGE

- NHS Greater Glasgow & Clyde is the largest NHS Board in Scotland with an Acute Division providing provide specialist and general acute care provision on a local, regional and in some cases national basis. There are eight sites which make up the Acute Services Division. These are: Glasgow Royal Infirmary, New Stobhill Hospital, Gartnavel General Hospital, Vale of Leven Hospital, Royal Alexandra Hospital, Inverclyde Royal Hospital, Queen Elizabeth University Hospital, and the New Victoria Hospital. The postholder will also work with Director and Executive leads across the following: - Six Community Health (and Care) Partnerships, migrating to become integrated Health and Social Care Partnerships;- Board Corporate Functions including Public Health, Planning and Policy, Communications, Organisational Development. The post-holder will be required to work closely with partner organisations, including Local Authorities, to influence and implement joint priorities. The post holder will liaise with national organisations to deliver specific policy objectives such as those outlined in Health Facilities Statutory Compliance and Risk Tool (SCART) Steering Group as directed by the Head of Corporate Estates. The postholder will be required to ensure delivery of key

strategic outcomes, working across the organisation to ensure delivery without direct line management or control of resources. As a compliance specialist you will support GG&C in the following:

- Monitoring the SCART E-tool - upkeep and management of GG&C element of this HFS tool including being a vital part of implementing further roll out within the Board.
- SCART Action Plan review.
- Managing the Compliance Smartsheet(s)/dashboard.
- Assisting Operational Estates Managers to find solutions to non-compliance issues on their sites.

I. Coordination and management, and collation and review, of Compliance performance monitoring and reporting requirements and tools associated with the above.

II. Training, guidance or other support to Boards staff on any of the above.

5. MAIN DUTIES/RESPONSIBILITIESSUPPORTING IMPROVEMENT- Manage the annual Compliance Action Plan process to ensure identification of ambitious actions and clear targets for improvement.

- Champion the process of constructive challenging and the culture of continuous improvement in relation to Compliance.
- Drive improvements in the organisation’s Compliance scores using the SCART e-tool model.
- Provide project management support to specific workstreams agreed in the Compliance Action Plan including developing clear business cases on the options, costs and benefits of individual schemes and co-ordinating implementation plans for agreed initiatives.
- Provide specialist advice and information on compliance issues to Head of Service and Sector Estates Managers.
- To maintain a horizon scan of future developments in Compliance including legislation and emerging best practice, and to provide early analysis of the potential impact on NHSGGC.
- Drive improvement in the Compliance process. PERFORMANCE REPORTING

- Delivering and managing a set of performance indicators at Board and Directorate level to demonstrate the impact of Compliance initiatives and opportunities for change.
- Ensure the SCART Steering Group is aware of national reporting requirements and prepare reports to meet deadlines;- Supporting the Head of Corporate Estates to ensure alignment between different reporting requirements.
- Develop and maintain strong links with SCART Steering Group members and senior teams to allow a collaborative approach to analyses and improvement initiatives.
- Monitoring and preparing reports on the progress against the Compliance Action Plans and specific aspects of compliance for the SCART Steering Group as required.
- Brief at senior internal and external level on any Compliance related issues as instructed by the Head of Corporate Estates
- Provide advice and direction to the board on effective evaluation and Compliance impact assessment
- Carry out assurance audits on specific topics reporting on same.

AWARENESS RAISING AND OWNERSHIP

- Be part of the Compliance awareness raising programme, to increase the profile of the Compliance agenda across estates and facilities.

PARTNERSHIP WORKING

- Develop links with Local Authorities in the Greater Glasgow and Clyde area to share approaches to Compliance and identify opportunities for joint initiatives.
- Develop links with external support agencies such as the Health Facilities Scotland, Zero Waste Scotland, Resource Efficiency Scotland, supporting joint working and managing specific projects where necessary.

SCART TOPICS

Water

- Scottish Health Technical Memorandum SHTM 04-01 & addendum.
- HSE Approved Code of Practice (ACoP) and Guidance ‘L8’.
- HE HSG274 Parts 1,2 & 3.
- BS8580 Water Quality.

- BS 7592 Sampling for Legionella Bacteria in Water systems: Code of practice; Low Voltage (LV)/High Voltage (HV)
- Scottish Health Technical Memorandum SHTM 06-03 – High Voltage
- Scottish Health Technical Memorandum SHTM 06-02 – Low Voltage
- Scottish Health Technical Memorandum SHTM 08-03 – Bedhead Services
- All relevant electrical regulations (17th Regs); Medical Gas Pipeline Systems (MGPS)
- Scottish Health Technical Memorandum SHTM 02-01Ventilation• Scottish Health Technical Memorandum SHTM 03-01 Pressure Systems
- Scottish Health Technical Memorandum SHTM 08-08
- HSE PSSR 2000Other SCART topics include the following.
- Confined Spaces
- Working at Heights
- Steam Systems
- Control of Substances Hazard to Health
- Lifts
- etc List is not exhaustive.

6. SYSTEMS AND EQUIPMENT On a regular basis post holder is required to use general information technology systems/packages including Intranet and Internet, Microsoft Word, Microsoft Access, Microsoft Outlook (email system), Power Point and Microsoft Excel. The postholder will be required to be familiar with emerging technologies and their use in increasing the compliance impact. The postholder is required to be familiar with systems and processes for engaging with wide groups of stakeholder, for example through the intranet, network sites and other web based approaches. Post holder is required to utilise paper files and simple filing systems (manual and computerised) for notes/reports. Post holder responsible for professional obligations in terms of the Data Protection and Freedom of information Acts. This post regularly utilises general equipment such as:

- Desktop computer, laptop, mouse, keyboard.
- Fax machine.
- Photocopier.
- Printers.
- Manual and electronic filing systems.

- Staff Net editing capabilities.
- Telephone and voicemail.
- PowerPoint e.g. in presenting in meetings.

7. DECISIONS AND JUDGEMENTS

The postholder will act as the expert advisor on the development of compliance, with minimal supervision, and will therefore have to exercise significant independent judgement to identify the key Compliance priorities. Post holder is required to operate autonomously on a daily basis including management of own workload, and provision of professional advice to other key agencies, partners and stakeholders. The postholder will need to exercise significant leadership, judgement and initiative in dealings with senior and Executive colleagues within NHSGGC, and when acting as NHSGGC representative on local and national partnerships. The postholder will agree a set of objectives and workplan with the Head of Corporate Estates. The post holder is expected to make decisions regarding the short-term and long-term duration of Compliance projects within their work plans to ensure they achieve the desired direction and outcomes overcoming potential and real barriers based on understanding and application of relevant evidence base. The post holder is expected to chair and manage meetings related to their work plan. The post holder is required to consider their own personal development and keep up to date with Compliance theory and knowledge at a specialist level.

8. COMMUNICATIONS AND RELATIONSHIPS

Post holder is expected to communicate at all levels across the Partnership/HSCP/Acute area and with other partner agencies including the establishment of key working relationships internal and external. Post holder is expected to communicate research, policy, and professional guidance to a wide range of professional and public audiences. Post holder is expected to produce written reports; IT based information and relevant resources for a wide range of professional and public audiences. Regularly undertake presentations and deliver training to a range of partners including professional and community members. The post requires high level of written and oral communication skills, including public speaking and facilitation skills, to engage with a range of stakeholders of varying seniorities and present information to support improvement. The post holder will be required to compile complex suites of

information from different sources against tight timescales and from sources where there is competition for time and intellectual resource.InternalSCART Steering Group members. Local Estates Meetings Acute and Partnership Directors.ExternalScottish Government. Public Sector Organisations e.g. Local Authorities and Community Planning Partnerships. National Organisations, e.g., NHS Health Scotland. Voluntary Organisations, e.g., Community Health Projects. Community reps and members, e.g., service users, young people.

9. PHYSICAL, MENTAL, EMOTIONAL AND ENVIRONMENTAL DEMANDS OF THE JOB

Physical Demands

- Regular use of computing equipment and VDU.
- Regular travelling across NHS Board area. Mental Demands
- Retention and communication of specialist knowledge and information.
- Frequent intense concentration for varying periods of time.
- Responding to unpredictable demands.
- Development and maintenance of complex set of internal and external relationships.
- Dealing with frequent interruptions that will require him/her to respond to requests for specific information and focus on a different task or activity.
- Concentration required when reading/writing documents and reports, especially when working to tight deadlines.
- Post holder is required to appreciate and understand other partner agencies working environment, limitations and agendas. The post holder is expected, at times, to acquire and understanding of other agencies specialist area.
- Management of conflict and regular problem solving.
- Ability to work with sensitive information and to control the release of that information.
- Ability to manage time and maintain priorities to deliver products against tight timescales to the highest of standards whilst being subjected to competing demands. Emotional Demands
- Challenges associated with partnership working. This can relate to conflicting agendas between partner agencies and the need to work towards an agreed goal or outcome.

- Ability to operate in a stressful environment whilst maintaining focus and decorum.
- Ability to make logical and evidence-based arguments in support of proposed improvement projects where there is often initial resistance to change.

10. MOST CHALLENGING/DIFFICULT PARTS OF THE JOB

- The post holder will be expected to complete tasks quickly and accurately with little supervision.
- The post holder will be expected to engage with a variety of stakeholders who have competing demands for their time to compile complex reports against tight deadlines.
- The post holder will be expected to react to emergent demands whilst still maintaining the timely and accurate production of core reports and analyses.
- The post holder will be expected to gain the respect and trust of senior stakeholders and expert influence beyond their direct authority.
- The postholder will work across the whole of NHSGGC and multi-agency partnerships to ensure the delivery of planned Compliance work streams and to ensure that these work streams are fully implemented and evaluated. This will require finding ways to influence people and organisations over which the postholder has no direct control.

11. KNOWLEDGE, TRAINING AND EXPERIENCE REQUIRED TO DO THE JOB

Qualifications

- Educated to degree level (or working towards) in an engineering, construction, environment or sustainability-related subject, or with extensive relevant equivalent experience.
- Further qualification or equivalent work experience or knowledge in a subject related to legislative and statutory Compliance including Health SHTMs and NHS Scotland SCART process.
- Membership or Fellowship of one or more Professional Institutes would be advantageous.
- Specialist knowledge of EU, UK and Scottish government policy, legislation and regulation in compliance, gained through extensive experience at senior level in the public sector (e.g. NHS, local authority or environmental regulatory body), or private sector. Experience:
- Project planning, management and implementation.

- Partnership working and negotiation.
- At least 3 years' experience of working at strategic level within a relevant programme area.
- Be a confident self-starter who can work unsupervised and develop innovative solutions following guidance.
- Proven ability to learn new skills and adapt to challenge, Knowledge:
- In-depth understanding of Legislative and Statutory Compliance within buildings.
- Understanding of NHS or similar complex organisation and related issues and policy; and
- Understanding of inequalities in health. Skills• Ability to analyse and interpret complex information in a variety of forms.
- Ability to communicate complex information and concepts to a variety of audiences in a variety of forms.
- Ability to work in partnership with individuals and organisations to improve Compliance.
- Excellent written and communication skills and ability to produce reports on complex issues.
- Ability to operate effectively under pressure.
- Ability to understand and communicate possibly contentious or sensitive issues.
- Excellent interpersonal skills and the ability to form positive relationships at all levels.
- Strong persuasive and influencing skills with ability to present ideas and proposals at a senior level.
- Clear analytical skills to allow exploration, evaluation and interpretation of information and opinions.

PERSON SPECIFICATION FORM

Job Title: - Compliance Manager Department:

- Estates Qualifications Essential (□) Desirable (□) Degree Level or equivalent in either an Engineering, Building Construction or Architectural discipline.

Chartered Professional in membership of a recognised Institute

A formal Management Qualification (minimum HNC)

Experience Essential (□) Desirable (□)Experience of statutory compliance reporting within a mechanical engineering field and specifically within healthcare.
Experience and knowledge of auditing procedures, reporting and processes.
Experience of producing compliance reports to senior managers
Have an understanding of IT systems specifically Smartsheet
Be able to produce action plans and report on same.
Behavioural Competencies Essential (□) Desirable (□)High level numeracy skills
Excellent communications skills
Methodical and structured approach to projects
Analysis and record keeping
Team Player
Other Essential (□) Desirable (□)Knowledge of NHS SCART System
Financial management

19. Please fully describe where the role was in the hierarchy of the organisational structure. Which staff reported to you, who did you work alongside, and who did you report to?

A Organisation position involved me and my post reporting to the Head of Corporate Estates, Alan Gallacher. No staff reported to me and Gary Cullen and George Walsh were individuals who worked alongside me dealing with electrical systems and mechanical systems. We all reported to Alan Gallacher.

20. Had the role been filled before your arrival?

A No, this role was a new position and no one occupied the role prior to me as Compliance Manager.

21. Had the functions been carried out before your arrival?

A No.

22. Was the allocation of those functions clear at that time?

A In part, I worked and developed systems which I put in place, still utilised today which greatly assisted the management of water systems within the healthcare environment.

23. At the time when you first became involved with QEUH/RHC, did your role and your involvement match your expectations?

A Mostly, but did allow for additional opportunities to introduce assurance opportunities for the Board.

24. To what frameworks or plans did you work to?

A SHTM 04-01 suite of documents, Building Standards (Scotland) Regulations 1990 (as amended), L8, etc

25. How, in general terms, did that role and involvement change over time?

A The role adapted from the beginning of occupation of the post.

26. What specific actions did you take once in post? Please give as much detail as possible of specific actions taken by you in order to fulfil the requirements of your role. It would be helpful if you could explain why you considered such actions to be appropriate.

A Initiate systems via Smartsheet to enable the Board and Management to be aware of what systems were in place to ensure compliance across water systems, COSHH, working at heights and Confined Spaces. I also supported the operational personnel with guidance and direction in respect of SHTM 04-01 associated regulation and interpretation and supported/infilled for operational estates in some areas which I considered to be appropriate, supportive and helpful in relation to ensuring that public safety was assured at any and all instances.

27. When did you leave your role at QEUH? Who took over from you?

A I left this role on 31st December 2022. No one took over from me. Greater Glasgow and Clyde did not take on another Compliance Manager as they made budgetary savings in respect the wages of a Compliance Manager and

decided to take on a Trainee Compliance Manager, therefore until the Trainee Compliance Manager completes their studies and experience, they will not take on the Compliance Manager title.

28. How did the role compare at the end of your tenure, compared to when you started?

A There had been significant changes to my role from the start of the role until the end of my tenure.

29. In your opinion, had the nature of the role improved over time?

A Yes.

The Water System at QEUH

30. What did you understand to be the main sources for governing the operation of the water system?

A SHTM04-01 suite of documents, L8, Authorising Engineer, Drinking Water Quality Regulator (DWQR) and Water Industry Commission for Scotland (WICS), etc.

31. What, in your view, are the most important requirements which those sources set?

A Patient/Public Health, engineering controls, standards, operational knowledge and safety of water systems, quality control aspects, environmental considerations, protection, sustainability, resilience/emergency procedures, etc.

32. Who has ultimate responsibility for the operation of the water system at QEUH?

A Duty Holder Jane Grant.

33. When you first encountered the water system at QEUH, was the allocation of that responsibility made clear in the arrangements in place for operating that system?

A I think responsibility was still being developed when the QEUH initially opened.

34. What would you expect to see in place, in order for responsibility to be properly allocated?

A Many aspects should be in place to understand a building you are being handed over such as Risk Assessment, know now as a Water Safety Plan, schematic drawings, familiarisation periods/introductions/sessions within an individual site, disinfection and associated documentation, awareness of proposed occupancy plans associated with a new building as if you do not understand the proposed use of a building there can be significant risks associated with any building, particularly in respect of immune-compromised individuals which can be significant in terms of patients within the Healthcare environment. Opportunities to review High Risk Areas with infection control colleagues, etc. Building Management Systems and appropriate staff/experienced staff and appropriate numbers, reporting structure to deal with any aspects of the system. Robust resilience plans in place and previously exercised prior to occupation.

35. Were the lines of responsibility in fact clear?

A No.

36. If not, what in your view was lacking from them?

A Points noted in question 34 above.

37. How clear was it to you that arrangements were deficient?

A Very.

38. Did you consider improvement of them to be within your remit?

A Yes.

39. If so, what actions did you take in order to improve the situation?

A Submitted a number of reports to my Senior for escalation and tried my best to support and provide direction for and to some of my operational estates colleagues.

40. What effect did your actions have?

A Positive on some occasions.

41. Were you satisfied with the outcome?

A No.

42. In your view, have any such shortcomings been fixed?

A In part, but I do consider that there are still risks associated with staff turnover, management's understanding of associated risk and resilience.

Water Scheme

43. Please describe your understanding of the purpose of a water scheme.

A My understanding is a system or design proposed for water systems via the distribution and supply via, e.g. Scottish Water or in the UK private water supply services and within healthcare to ensure the safety, quality and public safety of water/food systems, e.g. "proficiency testing in respect of food, water and environmental microbiology" published 17th January 2014 and last updated 9th March 2022.

44. Where does the requirement for a water scheme come from?

A Scottish Water, The Water Industry Commission, Drinking Water Quality Regulator, SEPA and private companies in the UK, Ofwat, DWI, Environment Agency, also UK Government and UK Health Security Agency in respect of the microbiology.

45. Were you familiar with the requirement before taking up your role at QEUH?

A In respect of the Healthcare “proficiency testing no, but Scottish Water yes.

Specific Roles in Governing the Water System at QEUH

46. What specific role did you fill in the governance of the water system?

A Ensuring/advising on compliance in respect of the water system.

47. Where did the requirement for such a role come from?

A Greater Glasgow and Clyde created the role and Alan Gallacher and Mary-Anne Kane interviewed and appointed in respect of the role.

48. Did the role allocated to you allow you sufficient scope to meet what was required?

A Not fully as individuals in posts to carry out all the operational requirements to meet compliance was also required.

49. What other specific roles were required in order to meet governance requirements for a water system such as that at QEUH?

A Experienced Authorised Persons.

50. Where, as a generality, did those requirements come from?

A SHTM04-01.

51. Were those roles in fact in place throughout your time at QEUH?

A No.

52. Who had responsibility for ensuring that they were filled?

A Chief Executive Jane Grant ultimately.

53. Insofar as those roles were not filled, are you aware of why this was not done?

A Not fully aware, but suspect budget funding.

54. When did they become filled? Was there a concerted effort to fill them? What prompted this?

A Melville Macmillan appointed Lead Authorised Person on 31st May 2018 and Kerr Clarkson Authorised Person on 25th July 2018, Darren Hopkins appointed Authorised Person 25th July 2018 and Scott Macer appointed Authorised Person 6th March 2018. James Guthrie appointed an Authorised Person role at QEUH on 24/08/2018 for the duration of 3 years. There were efforts to fill posts at QEUH and incidents at the QEUH and SHTM 04-01 prompted this.

Authorised Person for Water

55. Where did the requirement for this role come from?

A SHTM04-01, Water Safety Group, AE and Board.

56. During what period was this role filled during your time at QEUH?

A Melville Macmillan appointed Lead Authorised Person on 31st May 2018 and Kerr Clarkson Authorised Person on 25th July 2018, Darren Hopkins appointed Authorised Person 25th July 2018 and Scott Macer appointed Authorised Person 6th March 2018.James Guthrie appointed an Authorised Person role at QEUH on 24/08/2018 for the duration of 3 years. Reappointment of Melville Macmillan and Kerr Clarkson was undertaken for the reappointment at the end of their 2018 appointment. Authorised Person appointments are now undertaken via Alan Gallacher for an indefinite period for the tenure of the Authorised Person appointment.

57. What was required of this role? What functions would it address?

A Management of the water system. Water safety and management function were addressed.

58. Who had responsibility for ensuring that it was filled?

A Ultimately Jane Grant, Chief Executive via delegated responsibility via David Louden and Alan Gallacher.

59. What skills, knowledge or experience would be required of a person filling this role?

A Skills involving an awareness, knowledge and experience of having fulfilled the role of Authorised Person in respect of water systems.

60. During any period where it was unfilled, what happened as a result?

A There were a number of periods when the Authorised Person role was unfilled as individuals moved to other posts within the Board and steps were undertaken to advertise and fill the post via the Site Manager Operational Estates.

61. Was this satisfactory?

A No.

62. What action, if any, was required of you as a result?

A Expectation to assist where required in respect of arranging audits, support and advice where required and establishing systems.

63. Upon whom did the functions of this role fall during that period?

A Melville Macmillan appointed Lead Authorised Person on 31st May 2018 and Kerr Clarkson Authorised Person on 25th July 2018, Darren Hopkins appointed Authorised Person 25th July 2018 and Scott Macer appointed Authorised Person 6th March 2018.

64. When was it filled?

A Posts filled via Melville Macmillan appointed Lead Authorised Person on 31st May 2018 and Kerr Clarkson Authorised Person on 25th July 2018, Darren Hopkins appointed Authorised Person 25th July 2018 and Scott Macer appointed Authorised Person 6th March 2018. James Guthrie appointed an Authorised Person role at QEUH on 24/08/2018 for the duration of 3 years.

65. Who filled this role?

A Role filled via Melville Macmillan appointed Lead Authorised Person on 31st May 2018 and Kerr Clarkson Authorised Person on 25th July 2018, Darren Hopkins appointed Authorised Person 25th July 2018 and Scott Macer appointed Authorised Person 6th March 2018. James Guthrie appointed an Authorised Person role at QEUH on 24/08/2018 for the duration of 3 years. I was Compliance Manager over this period.

66. What prompted the filling of this role?

A The opening of the QEUH from 2015 and subsequent awareness of operational requirements/incidents/deaths.

67. What input did you have into this process?

A Appointment of Compliance Manager and active participation in ensuring Smartsheet and systems put into assist operational estates and Board reassurance.

68. Once filled, were you satisfied that the holder possessed the proper skills, knowledge and experience to carry out its functions?

A No for such a large site there is always a requirement for a new appointee to familiarise themselves with the system/plant which would generally take approximately 6 months if the individual was solely focussed upon the single topic of water systems, but the challenge within the Healthcare environment is that often an operational estates individual works across various systems.

69. Please provide any other comment which you feel appropriate. Insofar as this role may have been unfilled at any point at which it should have been filled, what effect did that have on the operation of the water system at QEUH, in your view?

A I think there were a number of pressures of a number of individuals who became very stressed and pressured with decision making requirements in terms of dealing with the water system, operational requirements and staff appointments.

Designated Person for Water

70. Where did the requirement for this role come from?

A SHTM04-01, Board Water Safety Group, AE and Board

71. During what period was this role filled during your time at QEUH?

A Upon email request of a copy of this appointment letter today, 29th May 2024 I am pleased to confirm that this appointment has now been filled and the appointment letter is dated 12th March 2024 and this is the first knowledge I have ever received within Greater Glasgow and Clyde of this appointment for Designed Person for Water having been filled.

72. What was required of this role? What functions would it address?

A There have been a number of different descriptions for the responsibilities of the role of Designate Person for Water within a number of different Water Policies over my tenure in the role of Compliance Manager, but the current Water Policy states the Director of Estates and Facilities (DE) states on page 17 “A2.3 Director of Estates and Facilities (DE) – Designated Person (Water) DP(W) The DP(W) has delegated executive responsibility with accountability to DH(W) for all safety, health and risk matters relating to Water Systems in NHSGGC, with the exception of the responsibilities delegated to the Designated Person (Pseudomonas)DP(P). The Responsibilities of the DP(W) include: Identify and ensure the efficient formal record of Water System risks and raising those considered appropriate from the BWSSG to the CMT via the BICC; Provide formal reports from the BWSSG to assure the Health Board via the CMT that the Board’s statutory responsibilities relating to Water Systems are being safely and appropriately discharged; Participate in a Compliance defined training programme for this role to maintain personal knowledge and a level of expertise allowing the efficient discharge of the DP(W) responsibilities; Identify to the CMT a risk-based prioritisation of necessary resources required to effectively manage and control water system risks arising from the Water Systems in the NHSGGC estate, to an acceptable level; Effectively manage the resources provided to safely maintain and to manage and control identified risks, to an acceptable level, as far as

reasonably practicable;□ Ensuring the implementation of all ‘Statutory Instruments & Mandatory Guidance’ related to Water Systems, (see examples in section, ‘Guidance’, in this Policy), and adherence to the NHSGGC Water Systems Safety Policy at all levels within the Directorate of Estates; Ensuring that Estates, through the Directorate management structure, are fully aware and appropriately trained in the Statutory and Mandatory requirements and standards for the provision and maintenance of Safe Water Systems;□ Ensuring, with the RP(P), that the Water System Safety Policy is regularly reviewed and updated;□ Chair the NHSGGC BWSSG (or nominated deputy) as per SHTM requirements ;□ Formally appoint a DDP(W), who will deputise for the DP(W) as required, undertaking delegated responsibilities;□ Formally appoint (or delegate the responsibility) to RP(W) at sector level, DRP(W) and AP(W) at site level and on larger sites also LAP(W).” Functions address would be as detailed/linked above.

73. Who had responsibility for ensuring that it was filled?

A Duty Holder Jane Grant.

74. What skills, knowledge or experience would be required of a person filling this role?

A Skills/knowledge and experience should include an understanding and awareness of water systems and associated risk which was historically delivered via the Legionella Awareness Course that many Managers and Senior Managers attended within Greater Glasgow and Clyde historically.

75. During any period where it was unfilled, what happened as a result?

A Business as usual.

76. Was this satisfactory?

A No.

77. What action, if any, was required of you as a result?

A Information, knowledge and SHTM, water systems interpretation as and when required.

78. Upon whom did the functions of this role fall during that period?

A Alan Gallacher.

79. When was it filled?

A 12th March 2024.

80. Who filled this role?

A Tom Steele.

81. What prompted the filling of this role?

A The requirement would have been prompted through the SHTM 04-01, Water Safety Group, AE and historical events at the QEUH and possibly the Duty Holder, I think.

82. What input did you have into this process?

A I historically verbally asked and emailed my senior for copies of the appointment letters for the holder of Designated Person as this document was regularly asked for by Waters Systems colleagues and enables SCART, AE Audit and Risk Assessment questions/points to be closed down.

83. Once filled, were you satisfied that the holder possessed the proper skills, knowledge and experience to carry out its functions?

A I am unaware of the knowledge and experience of the holder in respect of the functions required, but I am hopeful that the assessment system now in place at GG&C is robust in respect of satisfying the Duty Holder Jane Grant to issue the appointment.

84. Please provide any other comment which you feel appropriate. Insofar as this role may have been unfilled at any point at which it should have been filled, what effect did that have on the operation of the water system at QEUH, in your view?

A There are lessons to be learned in respect of not having previously filled the role of Designated Person as senior posts and for other staff holding appointments in respect of Water Systems it is important to set good role

examples and provide Board reassurance. Effect being possibly lack of control at the QEUH.

Competent Person for Water

85. Where did the requirement for this role come from?

A SHTM04-01, Water Safety Group, AE and Board.

86. During what period was this role filled during your time at QEUH?

A On the following dates the following individuals were trained David Fickling 20th March 2018, Andrew Hamilton 21st March 2018, Peter McCabe 20th March 2018, Mark McInally 24th July 2018, Shawn O'Neill 24th July 2018 and Jason Weir 24th July 2018, however no appointment letters were held centrally on record for these individuals. A further 12 off individuals were proposed Competent Persons who had attended WHH02 training during 2018, 2019 and 2022, but had not been recommended being Paul Shorts, Jennifer Materne, William Murray, Thomas Ramsay, Inglis Martyn, Stephen Gilmour, Brody Johnston, Chris Quinn, Daniel Martin, Grant Bennett, Stuart Lapping and William Fenn. I created records on the Smartsheet for these CPs, but there was initially no official appointment documentation.

87. What was required of this role? What functions would it address?

A Water systems knowledge, experience and qualifications to carry out effective healthcare maintenance on water systems. Functions such as planned preventative maintenance tasks and dealing with emergencies and breakdowns, such as thermostatic mixing valve maintenance, temperature monitoring and maintenance related activities, repairs to damaged pipework/outlets/water systems. flushing, etc.

88. Who had responsibility for ensuring that it was filled?

A Duty Holder Jane Grant, Designated Person, Authorised Person, Authorising Engineer, Infection Control and Senior Management involved in decision making in respect of water system.

89. What skills, knowledge or experience would be required of a person filling this role?

A Experience of practical plumbing/water systems work within the Healthcare environment and time served plumber, qualified to HNC level with 5 years post apprenticeship experience and cross trade duties related to HVAC and electrical systems.

90. During any period where it was unfilled, what happened as a result?

A Some works were covered by Contractors and generally business as usual.

91. Was this satisfactory?

A No.

92. What action, if any, was required of you as a result?

A Raising concerns to Management of lack of resources/personnel.

93. Upon whom did the functions of this role fall during that period?

A Site Management being Ian Powrie, Andy Wilson and Colin Purdon to escalate to Management the lack of personnel on site and requirements for more staff.

94. When was it filled?

A David Fickling 20th March 2018, Andrew Hamilton 21st March 2018, Peter McCabe 20th March 2018, Mark McInally 24th July 2018, Shawn O'Neill 24th July 2018 and Jason Weir 24th July 2018, however no appointment letters were held centrally on record for these individuals. A further 12 off individuals were proposed Competent Persons who had attended WHH02 training during 2018, 2019 and 2022, but had not been recommended being Paul Shorts, Jennifer Materne, William Murray, Thomas Ramsay, Inglis Martyn, Stephen Gilmour, Brody Johnston, Chris Quinn, Daniel Martin, Grant Bennett, Stuart Lapping and William Fenn.

95. Who filled this role?

A David Fickling 20th March 2018, Andrew Hamilton 21st March 2018, Peter McCabe 20th March 2018, Mark McInally 24th July 2018, Shawn O'Neill 24th July 2018 and Jason Weir 24th July 2018, however no appointment letters were held centrally on record for these individuals. A further 12 off individuals were proposed Competent Persons who had attended WHH02 training during 2018, 2019 and 2022, but had not been recommended being Paul Shorts, Jennifer Materne, William Murray, Thomas Ramsay, Inglis Martyn, Stephen Gilmour, Brody Johnston, Chris Quinn, Daniel Martin, Grant Bennett, Stuart Lapping and William Fenn.

96. What prompted the filling of this role?

A Senior Management understanding the associated risk and filling the role.

97. What input did you have into this process?

A Raising verbal concerns and producing Audits.

98. Once filled, were you satisfied that the holder(s) possessed the proper skills, knowledge and experience to carry out its functions?

A No as there is still the important role of site familiarity which cannot be underestimated, particularly on a site such as the size of QEUH, also I would always have concerns about handovers in respect of annual leave and sickness.

99. Please provide any other comment which you feel appropriate. Insofar as this role may have been unfilled at any point at which it should have been filled, what effect did that have on the operation of the water system at QEUH, in your view?

A Yes, there were risks associated with the lack of personnel in post at the QEUH, but this particular site suffered many negative impacts from the start, design, build, assessing the correct and suitable number of staff required to manage such a sizeable site, therefore there are significant lessons to be learned for all involved.

Authorising Engineer for Water

100. Where did the requirement for this role come from?

A Commodity Action Report and Eps Bulletin (CAREB NP813) via National Procurement and National Services Scotland due to requirements of the SHTM04-01 and ultimately Scottish Government.

101. During what period was this role filled during your time at QEUH?

A My memory is that the role always appeared to be filled.

102. What was required of this role? What functions would it address?

A This role changed via a number of Water Policies which were approved during my tenure, but the following details the current role and functions of the Authorising Engineer. A2.8 Authorising Engineer (Water), AE(W)The AE(W), is appointed in writing by the CRP(W) and is employed independently of NHS GG&C. The AE(W) acts as an independent professional advisor to NHSGGC with a brief to provide services in compliance with relative 'Statutory Instruments &Mandatory Guidance', and particularly with Scottish Health Technical Memoranda(SHTM) 04-01, mandatory guidance for the NHS in Scotland. The AE(W) will have specialist knowledge of large scale domestic and commercial hot and cold water services installations including incoming supplies and Other Risk Systems as detailed in Appendix 3 and in particular, those installations for which an Authorised Person (Water) will assume responsibility for. The AE(W) is free to comment on the performance of the organization against the operational risk base. The AE(W)'s main duties will include: To be a formal Assessor, making recommendations to the CRP(W) for the appointment of AP(W) in terms of skills, training and site familiarity; Formally monitoring the performance of NHSGGC against 'Statutory Instruments & Mandatory Guidance', particularly, ACoP L8, HSG274 (Parts 1,2 & 3), and SHTM 04-01 guidance; The provision of a formal, annual L8 Audit at all NHSGGC Acute sites including our large hospitals where there are in/outpatients and an audit every 3 years for all remaining sites. Reporting of potential risks (operational and through potential improvements).

103. Who had responsibility for ensuring that it was filled?

A Alan Gallacher managed the contract for filling the role via delegated powers from Alan Gallacher's Seniors.

104. What skills, knowledge or experience would be required of a person filling this role?

A Knowledge of the requirements of the role of the Authorising Engineer.

105. During any period where it was unfilled, what happened as a result?

A I have no memory of the post being unfilled as even when the Contractor became out of date an extension was generally given to the Authorising Engineer.

106. Was this satisfactory?

A No not ideal, but the role was always covered and sometimes due to human input tendering processes can take longer due to retirements, sickness, annual leave for example.

107. What action, if any, was required of you as a result?

A No action required of me in this instance.

108. Upon whom did the functions of this role fall during that period?

A Dennis Kelly.

109. When was it filled?

A Alan Gallacher retained the contract documentation in respect of the Authorising Engineer, therefore I did not see the initial contract documentation, but Dennis Kelly was the Authorising Engineer from my tenure in the role.

110. Who filled this role?

A Dennis Kelly.

111. What prompted the filling of this role?

A The CAREB, SHTM04-01 and Duty Holder.

112. What input did you have into this process?

A I provided feedback later in my appointment in respect of additional points to include in the future CAREBs.

113. Once filled, were you satisfied that the holder possessed the proper skills, knowledge and experience to carry out its functions?

A Dennis Kelly is a very knowledgeable and experienced individual in respect of microbiology and water systems, however I would have to say no as any lives lost represents dissatisfaction and more as there are unique challenges in respect of fully managing and understanding what needs to be delivered across a new site in terms of individual patient and staff situations in terms of their immune-compromised state, environment, occupation, risk, personnel number, personnel experience, dissemination of information, etc.

114. Please provide any other comment which you feel appropriate. Insofar as this role may have been unfilled at any point at which it should have been filled, what effect did that have on the operation of the water system at QEUH, in your view?

A My experience is that I have been fortunate to have been assessed and worked with both appointed AEs in respect of the Authorised Person for Water Systems' role within GG&C and both have different approaches, which is a unique opportunity, however like other personnel each AE have different approaches, accreditation, focus, etc. Effects on the operation of the water system at the QEUH, once again is whilst loss of life is tragic and completely unacceptable, lessons can be learned in respect of planning, preparation and resilience for future sites, although I do not personally think another Hospital the size of the QEUH will be constructed again.

Requirements in Respect of Legionella

115. What roles are specifically required in respect of Legionella?

A Roles such as Duty Holder responsibilities, risk assessment and associated requirements, landlord considerations, legionella management, monitoring and testing, engineer controls, suitably qualified delegated and Responsible people appointments, appropriate contractor appointments, ensuring adequate systems insitu and taken into account. Specific risk assessment management and consideration in terms of ionisation, also individual and specific risk assessment systems, e.g. dialysis systems, etc and consideration of personnel being suitably qualified to fulfil important roles within the Healthcare environment.

116. Where does the requirement for this role(s) come from?

A The Health and Safety at Work Act and Management of Health and Safety at Work Regs.

117. What functions are required of this role(s)?

A Functions in respect of the management of water systems for employers, employees and landlords including legionnaires' disease and subsequent control of legionella bacteria in the water systems.

118. During what period was this role(s) filled during your time at QEUH?

A During tenure of my employment.

119. Who had responsibility for ensuring that this role(s) was filled?

A Duty Holder and Senior Management with delegated powers.

120. What skills, knowledge or experience would be required of a person filling this role?

A Knowledge and understanding of their requirements.

121. Who was appointed to this role(s)? When?

A Duty Holder, Senior Manager, Responsible Persons, Authorised Persons, Competent Persons, Competent Contractors, Infection Control. I am aware of

the appointments across Estates and Contractors as per the Smartsheet Appointment Register, but not fully aware in respect of Infection Control.

122. Was this satisfactory?

A No as there was still loss of life, therefore I would not regard this as satisfactory.

123. Were you satisfied that the holder(s) possessed the proper skills, knowledge and experience to carry out the required functions?

A No.

124. Please provide any other comment which you feel appropriate. Insofar as these role(s) may have been unfilled at any point at which it should have been filled, what effect did that have on the operation of the water system at QEUH, in your view?

A Important and essential lessons to be learned in respect of the operational of the water system at the QEUH.

Specific Measures for Governing the Water System at QEUH

Please refer to the **Water Safety Group Bundle** to assist with your answers to this topic.

125. Please set out your understanding of the requirement to have a Written Scheme in place for governing the water system at QUEH. What is the significance of this?

A Vital as a Written Scheme is the main document centre for all aspects of effective water scheme and system management. This document is significant because the management, their roles, responsibilities, tasks, personnel, appointments, system, control, engineering, plant, records, occupants, permits, procedures, safe systems, schematics, PPMs, checks, sampling, emergency information/procedures, action response guidance, HAI

Scribe requirements, Little Use Outlet guidance, microbiologic risks, contact and associated details are all required to deliver compliance.

126. Was such a Scheme in place when you started work at QEUH?

A Yes.

127. Whose responsibility was it to put a Scheme in place?

A Duty Holder and Senior Managers with delegated powers.

128. Who prepared that Scheme?

A Alan Gallacher, Gerry Cox, Melville MacMillan, Colin Purdon and Phyllis Urquhart.

129. From when was it in place?

A December 2016 as detailed on the QEUH Water Systems Compliance Tool Smartsheet page.

130. Did this meet your expectations?

A No.

131. Please make any other comments which you feel appropriate regarding the Written Scheme.

A A Written Scheme is almost a living document in terms of the QEUH and requires regular review.

132. Please set out your understanding of the requirement to have a Water Safety Plan in place at QUEH. What is the significance of this?

A A Water Safety Plan is essential at the QEUH and I have previously emailed a report which was raised at the Board Water Safety Group, with particular emphasis on BS8680:2020 which provided useful guidance on development and implementing a water safety plan as this can have significant effect/impact of the safety of the water systems within the QEUH and throughout the Board.

133. Whose responsibility is it to have a Plan in place?

A Duty Holder Jane Grant.

134. Was such a Plan in place when you started work at QEUH?

A I was informed by my Senior Alan Gallacher that the Water Safety Plan in place was the entire picture of all water documentation within GG&C, but there was no sole document that I was aware of that was titled “Water Safety Plan”.

135. From when was it in place?

A As per the Board Water Safety Group Meeting of Tuesday, 12th August 2020 (which unfortunately I was unable to attend due to annual leave), “It was suggested that an interim water safety plan is created for the site and MR/TF/AG and DK meet to discuss the areas that can be mitigated. Tanks are cleaned yearly and contractors on site to eliminate the dead legs as they are found but with staff being located all over the building this proves difficult to progress. By carrying out the suggested above will provide due diligence. SCART will be update and AG will discuss with PU to ensure that the question set is complete. Additionally MR stated that additional staff for maintenance had been requested but not fulfilled and Gartnavel maintenance staff have been used to fulfil tasks on site.”

136. Who prepared that Plan?

A I do not know.

137. Did this meet your expectations?

A Difficult to answer as I do not have the full details.

138. Please make any other comments which you feel appropriate regarding the Water Safety Plan.

A As stated previously in point 134 I am not aware of a single document named “Water Safety Plan” but was informed that the composition of documents

across off the water systems in terms of Logbook, Water Policy, SHTM requirements, etc all made up the Water Safety Plan.

139. Please set out your understanding of the requirement to have a Water Safety Group in place for governing the water system at QUEH.

A Water Safety Group is very important in respect of the health, safety for patients and visitors, Board assurance for the organisation and compliance.

140. Was such a Water Safety Group in existence when you started work at QEUH?

A There have been individuals focussed on Water Safety who meet as a group in terms of the Board Water Safety Group and also the historical South Sector Water Group Meetings. This is difficult for me to answer as I was not provided with the full details.

141. From when was it in place?

A From the beginning of my tenure the above-mentioned groups were in place.

142. Did you participate in the Water Safety Group? From when?

A I participated in the Water Safety Groups I was invited to, which were dependent upon who wanted me to attend the meeting.

143. How well did the group function? Did the group achieve appropriate engagement among necessary participants?

A Not always, but there were times when the group were effective.

144. Were its activities properly recorded?

A Not always as some activities may not have been recorded historically.

145. What use to you, in your role, was your attendance at the Group?

A Yes, useful as I could confirm/clarify some of the works complete/undertaken, raised operational concerns, etc in relation to across the Board.

146. What contributions did you make? **Page 71 within the Water Safety Group Bundle.**

A Many contributions and with reference to Page 71 within the Water Safety Group Bundle I assisted each and every Authorised Person responsible for Water Systems across the Board, and not just the QEUH, with populating and developing the Water Safety Written Scheme Template, to ensure that it reflected their individual site(s) that was introduced to each and all sites within the Board. This does not necessarily mean each Written Scheme is the same as each individual site within the Board can have varying staff/plant, etc which needs to be taken into account whilst populating the template.

147. How effective was the Group as a whole in contributing to the proper operation of the water system at QEUH?

A There were some individuals more proactive and effective than others.

148. Did it meet your expectations?

A Not completely.

149. Please make any other comments which you feel appropriate regarding your experience of the Water Safety Group.

A There has been significant change and advancement in all Water Safety Groups across the Board not only during my tenure, but there are important works/direction/joined up thinking/dissemination of information required to date.

<u>Online Water Compliance Tool Page</u>

Water Safety Group Bundle page 96

150. Please describe this innovation and how it came about? What is a 'Smartsheet'?

A From memory I first heard of Smartsheet via Joe McIlwee who was a work colleague in GG&C.

151. What was its purpose?

A I was informed the purpose of Smartsheet was to detail and deliver compliance records across as our Information Technology systems within NHS GG&C presented too many barriers/fire walls in terms of being able to invite contractors/Authorising Engineers, etc to review individual site details. I was suspicious of the Electronic System initially as I could not understand why the organisation wanted the NHS to utilise an American Electronic System and had some reservations about data protection requirements.

152. How did it operate?

A There was a requirement for each "Admin" type user of the Electronic System to possess an individual licence which would enable each Compliance Manager to create systems and records to aid site input via operational teams.

153. How did it assist you in fulfilling your role?

A The system was very useful in respect of fulfilling the Compliance Manager role for many reasons such as creating a document centre which benefited all concerned.

154. How effective was it?

A This system was essential in respect of providing information across Estates, Property and Facilities in terms of assurance and compliance situation reports for Responsible Persons, Designated Persons, Authorising Engineer, Authorised Persons, Capital Staff and Senior Management.

155. What significance did it have for record-keeping at QEUH?

A This system enabled me to create a document centre to create and develop systems which permitted a central document centre and avoided the

embarrassment of Authorised Persons flapping and struggling to locate the necessary documentation required for Board assurance, management support information, audits and Authorising Engineer Reports.

156. How satisfactory was record-keeping before this innovation?

A Not very effective from my initial observations in QEUH.

DMA Canyon 2015 L8 Report

Refer to Bundle 6 – Miscellaneous documents – documents 29 and 30.

157. DMA Canyon prepared a Legionella Risk Assessment in April/May 2015. Were you aware of this report before you moved to take up your role at QEUH?

A No, I started in the post in 2017.

158. When did you become aware, and in what circumstances?

A 3rd July 2018 when Smartsheet created and circumstances in relation to providing support to evidence closure of RA actions.

159. What was the purpose of your becoming aware of it?

A To assist operational estates with closing and evidencing actions from RA.

160. Who brought it to your attention?

A Alan Gallacher.

161. Did you see the assessment at that time, or were you only aware of it?

A I saw it on 3rd July 2018, and I was not aware of the assessment previously.

162. What, if anything, did you do in regard to that assessment at that time?

A Create a document centre and provide estates support to evidencing closing down actions.

163. What did you understand to be the significance of the report, at that time?

A Urgent and important significance in respect of incidents at the QEUH.

164. What knowledge did you have at that time of the extent to which the report and its contents were known about at QEUH?

A No knowledge.

165. Do you know, or are you able to say whether it is likely, that the following people became aware of the report at the time it was received at QEUH:

a) Alan Gallacher

A No, I cannot say, sorry.

b) Jane Grant

A No, I cannot say, sorry.

c) Mary Anne Kane

A No, I cannot say, sorry.

d) Ian Powrie

A No, I cannot say, sorry.

e) Tommy Romeo

A No, I cannot say, sorry.

f) David Loudon

A No, I cannot say, sorry.

166. When did you first see the DMA 2015 risk assessment in full?

A I did not see the document as it was Andy Wilson who emailed me a comparison document in respect of some actions closed between the 2015 and 2017 risk assessment.

167. Who brought it to your attention?

A Andy Wilson.

168. What was the purpose of doing so?

A To create a document centre in respect of assisting estates to close and evidence the closure of actions.

169. What view did you form upon seeing it?

A I considered the document to be very important in respect of health and safety.

170. What did you do as a result?

A Create a Smartsheet record to ensure evidence of closure of actions was held to provide some form of Board assurance and record.

171. At that time, what was your understanding of the extent to which the assessment and its contents were known at QEUH? Please comment on this.

A Little understanding.

172. In your view what action ought to have been taken when the DMA Canyon assessment was received at QEUH?

A The assessment should have been actioned upon in respect of risk, closing actions, providing evidence, highlighting actions at Water Safety Group Meetings for instance.

173. Are you aware of why that action was not taken (if it was not)? If you are not aware, in your view what is the likely reason why?

A No, but I suspect a lack of understanding and awareness of individuals involved not understanding the importance of taking action legally and responsibly.

174. Please comment on the significance of that failure (if action was not taken). What issues are raised, in your view?

A Deaths, pain and suffering, for example, could have been avoided and public safety could have been achieved.

175. In your view, what does this indicate about the structure at QEUH?

A This highlights that the structure was ineffective.

176. Please comment on the work you carried out with DMA Canyon in respect of the 2018 risk assessment. Refer to **Water Safety Group Bundle page 96** to assist with your answer.

A Work carried out, as per point 176 included creation of Smartsheet systems in respect of training, checks on flow straighteners across the Board, water cooler works, asset lists works, working on written schemes, etc.

2017 Water System Audit

177. What is required of a Water System Audit?

A A Water Systems Audit should cover Management, Policy, Roles, Incident, Accidents, Dangerous Occurrences, Safety Documentation (RAs), Operating Records, Inspection and Verification, Safety equipment and access control, engineering systems, engineering work spaces, environment and assurance.

178. Where does that requirement come from?

A SHTM, L8, HSE and LCA.

179. Who is responsible for carrying out a Water System Audit?

A Experienced company in respect of the healthcare environment.

180. Who is responsible for ensuring that it gets done?

A Duty holder and responsible persons.

181. How often ought an audit to be done?

A Annually.

182. What is the normal procedure for carrying out such an audit? Please describe what roles would be involved.

A At that time organising for a company to carry out an Audit. Roles at that time would involve Alan Gallacher informing me who he had chose to carry out the audit as he was the budget holder.

183. At the time when the 2017 audit was to be carried out, were you aware of any previous audit?

A No.

184. Ought there to have been a previous audit?

A Yes.

185. Whose responsibility would that have been?

A Duty holder Jane Grant and responsible persons.

186. Would it have been possible to safely maintain the water system in the absence of such an audit?

A No.

187. When you first took up your role at QEUH, were you aware of a specific process for managing risk around the water system?

A Yes.

188. What measures were in place for managing such risk?

A The GG&C Water Policy.

189. Please comment on the adequacy of the arrangements around managing risk.

A Not robust enough.

190. When did you become aware that there was a requirement to carry out an audit in 2017?

A 1st November 2017 when I started the post.

191. Describe the process around the 2017 audit. Did it conform to normal practice?

A Involved in meeting with the Company and establishing timelines for delivery of the audit and this appeared to be normal practice at this time.

192. Who carried it out?

A DMA

193. Describe your involvement.

A Establishing a programme and ensuring all requirements were covered.

194. Who else was involved?

A Alan Gallacher.

195. Is this how you would have expected the process to take place?

A No.

196. Were you satisfied with the process?

A No.

197. In the 2017 audit there is a reference to the 2015 DMA Canyon report, which is said to be the only preceding risk assessment at QEUH. Are you aware that you are cited as a possible source by which the 2015 report came to the attention of the auditor? Please comment on this.

A I am not surprised as as the Auditor would expect me to be aware of the 2015 DMA Canyon report because ths Company have been aware of me being

involved in Water Systems within the Healthcare environment for a number of years and having previously and presently carried out the role of Authorised Person. The Auditor may not have been aware of the fact that I took up the Compliance Manager role on 1st November 2017 when my focus was pushing water safety throughout the Board and not just within the QEUH at that point.

198. Are you aware of how it came to the attention of the auditor? If not, can you comment on other routes by which might have come to his attention?

A I do think there were many pressures on individuals at that time in respect of the QEUH and I believe the auditor would have innocently just assumed that I had knowledge of this report.

199. To what extent were you in fact aware of it at that time?

A I started my Compliance Manager role on 1st November 2017 and prior to me starting I was working in the North and the QEUH fell under the South. At this time the South and North were very separate in terms of areas and did not generally discuss each other's water systems, as there were very separate Sector Meetings held via Sector Estates Managers at that time, other than possibly Management discussing water systems at Board Meetings for instance.

200. How, in your view, ought it to have come to the attention of the auditor?

A Possibly someone has provided the auditor with incorrect' information, but I cannot say who provided this information sorry.

201. Please comment on the significance of the auditor not having been aware of it before commencing his auditing process.

A Very surprising.

202. Who ought to have known of the 2015 DMA Canyon report?

A All involved in water systems within the QEUH, duty holder, responsible persons, authorising engineer, authorised persons and competent persons.

203. Did such persons in fact know of it?

A There may have been individuals who were aware of the report, but I cannot, with confidence state who sorry.

204. Whose responsibility was it, or ought it to have been, to ensure that the 2015 DMA Canyon report was known about?

A Duty holder, Designated person, responsible persons, authorised persons, authorising engineer, competent persons and all involved in roles related to the safety of the water system at the QEUH.

205. Whose responsibility was it, or ought it to have been, to ensure that appropriate action was taken in respect of the contents of the 2015 DMA Canyon report?

A Duty holder, Designated person, responsible persons and authorised persons involved in the water systems.

206. In your view, was the significance of the 2015 DMA Canyon report properly understood within QEUH prior to 2017?

A No.

207. When was the significance of it understood?

A When I started work in the NHS on 16th July 2012, I had experience of working with water systems, but didn't appreciate the challenge on first entering the service of the in depth aspects of water systems within the Healthcare environment. This role was a quick and steep learning curve which involved educating and influencing a lot of senior figures operationally and clinically to achieve the end goal of water safety. At that time when I started taking water samples and reporting results, I used to get telephone calls at this time asking what I was doing with the water system in the Beatson. For instance, I received calls from, reportedly senior managers and Directors who did not understand the process or the requirements and of

course I was cautious to discuss any details on the telephone with anyone whom I had not met before and was also cautious about ensuring any statements were filtered through the appropriate channels of the Press Officer for example. I think NHS GG&C staff have been on a learning curve from this date and I had regularly asked for the Duty Holder and possible designated persons to attend Legionella Awareness Training in order to educate and spread the "risk" message. There have been significant advances made in respect of a greater understanding of water systems over a number of years, but also there have been many quick wins in relation to little used water systems, water coolers and responsibilities over the years, but also, frustratingly I do consider I personally have had years of influencing and spreading the water safety message (and continue to do so). In conclusion I think this is one of the reasons I was asked to apply for the Compliance Manager role within Greater Glasgow and Clyde. Upon the creation of the Compliance Manager new post one Manager had possibly noticed that I had waters systems/records in place whilst working in my current operational role, whilst other sites across the Board did not. Although at the time of advertising of the new Compliance Manager role I did not feel like this was a positive opportunity initially, as I also valued working within my current role across all operational estates systems at that time and thought that my contribution was misunderstood, but then soon I appreciated the opportunity to be involved in the creation of robust and auditable water systems within the Board and I then completely appreciated and valued the role.

208. Please comment further as you consider appropriate.

A There are still significant works to do within the Healthcare environment as more and robust communication and risk mitigations is required between Capital, Minor works projects and contractors carry out maintenance and works within the Board and I shall strive to positively contribute and influence these requirements at all and every opportunity.

209. Do you agree that temperature and movement are the primary control mechanisms for the water system at QEUH?

A Yes, but one cannot consider this in isolation as there are so many other holistic considerations, for example you have your water systems operating at 60oC flow and 55oC return and the water is moving throughout the pipework system which reduces the risk of stagnation, but to consider are there any leaks that can introduce risk for immune-compromised individuals or could someone be working on the system at any particular time and can these emergency/unforsee events introduce risk for instance. Other risks can be loss of engineering controls such as pumps, bladders, etc.

210. Are there any other control mechanisms in use?

A Yes, dosing system and filter control are other useful mechanism (both incoming water/point of use filters). Serious consideration should also be given to risk assessment and complete mitigation where possible.

211. How familiar were you with temperature as a control mechanism before taking up your role at QEUH?

A Quite familiar as when I started as Senior Hospital Estates Manager in 2012, I asked the Fitters to increase the temperature at the calorifiers at Gartnavel General Hospital and they told me they had been in the NHS years and had never carryout this task. However, after some reassurance the task was acted upon and we received significant temperature improvements. Temperature control is very important in respect of water for so many reasons.

212. How effective was it as a control mechanism?

A Not effective.

213. What risks does temperature control present:

a) In respect of ability to maintain required temperatures

A Significant risk associated with the loss or ineffective control/maintenance associated with required temperatures and resultant microbiological risk.

Specific risk associated with patient/immune-compromised patients and public safety. Issues with ineffective sensors liked to Building Management Systems temperature control and monitoring systems. Human error associated with checking temperatures on existing systems. There is also significant scald risk associated with inability to maintain temperatures. This duty requires very specific management, control and response activity in terms of risk posed to patients.

b) In respect of susceptibility to pathogens

A In general, immune-compromised individuals, such as bone marrow patients, individuals going through cancer, reduced immune system patients, dialysis patients and staff at work who may be working through health challenges are at risk of bacteria/contamination, legionella, pseudomonas, E.coli, etc within the water system, particularly from aerosols.

c) In respect of any other aspect

A Water temperature control was previously and traditionally known as a strategy for reducing the risk of legionella and detailed in the older SHTMs, but later removed to introduce greater flexibility. This is significant as water sitting at 37-40oC present the opportunity for legionella to double (in good conditions) within 15 minutes and other bacterial growth which represents significant risks to all coming in and around water system.

214. Did those risks in fact materialise?

A Yes.

215. What measures would be required as a result?

A Urgent action associated with potential risk associated with the system, who is and would be affected, migration, action required to regain control and avoid losing control again in the future, via any and all controls available, including education.

216. Were those issues and measures identified at QEUH? When and by whom?

A Yes. Unfortunately, too late in respect of the risks and by Senior Managers, Authorised Persons, Responsible Persons, Competent Persons, Risk Assessment Contractors, Authorised Engineers in 2017 from my awareness.

217. Were the necessary measures carried out?

A Yes.

218. When was the necessity for them identified? Were they carried out from that point onwards?

A The necessity was immediately and in advance of construction works. They have not always been carried out from that point onwards as evidence of non-compliance in Edinburgh, etc has been in the news for example.

219. In your view, what other measures would have been desirable? Please comment further as you consider appropriate.

A Awareness training mandatory for all Head and Senior Management Staff to ensure awareness and greater reporting systems. More regular auditing and the importance of ensuring audits and associated actions are complete and not simply stopped when negative/undesirable results appear to be initially coming out of the audit. A foreside and holistic overview of water systems, a simple learnpro that explains to all staff the importance of flushing and aspects of our water system and what happens if we don't carry out these simply measures as there are still activities throughout the NHS where individuals/managers think NHS spaces are their own and they can do as they wish with them, for example turning disused toilets/shower rooms into storage spaces for clinical equipment/files, just basic ideas and learning which can help so much in terms of water safety.

Dead Legs

220. Please describe your understanding of what a dead leg is, how it comes about, and what problems are raised thereby.

A A deadleg is pipework leading to a fitting which water only passes infrequently and when there is draw off from the fitting which can provide the potential/risk for stagnation. This means if the water is not circulating and moving this situation can lead to stagnation.

221. Did you encounter dead legs at QEUH?

A Yes in 2017.

222. Are you able to comment on the significance of this?

A Yes, this was significant as many are aware of the incidents involved in the QEUH, however if we do not monitor/measure/assess the proposed works across any water system there will always be risk associated with the water systems as someone with requisite knowledge and skills needs to assess proposed plans prior to works commencing on site.

223. What measures were required to address the problem of dead legs? Action would be required of whom?

A Budget provision and depending upon the extent of the dead leg removal, risk assessment determining the use of the area, potential HAI Scribe, agreement with staff, relocation of patients, Infection Control agreement/input/approval, potential building warrant, method statement in terms of rams/disinfection, isolation programme to name just a few considerations, associated fire escape restrictions for potential areas isolated to enable works to be carried out which affect means of escape, ensuring that there is a plan which has been altered and works recorded in the Log book, Alterations File and Risk Assessment Action plan as required.

224. Please comment on the effectiveness or otherwise of flushing as a means of addressing the problem. What challenges are raised for staff?

A Flushing and effectiveness must always be assessed as where Managers are not aware of what duties may be covered by an individual, and it is difficult for the Manager to properly assess which areas to flush which are little used in the leave or sickness absence of staff. We are as a Board moving in a positive way to close down this risk. However, I can think of an occasion

where a Manager did not realise the importance of dealing with a neonatal area in respect of enabling a domestic member of staff annual leave and rather than ensuring the existing Manager has the staff members duties covered, they instead left their duty uncovered and their focus seemed to be placed on lesser risk associated wards.

225. Please comment on the effectiveness or otherwise of point of use filters as a means of addressing the problem.

A Point of use filters can be effective in respect of risk, but this is not a holistic solution as you can have risk associated with individuals who may/could remove point of use filters then reattach the POU filter as care is required in respect of cleaning individual outlets/areas on a daily basis and associated education and training requirements.

Single Rooms

226. You will be aware that QEUH operates on the basis of single rooms. What issues, from your perspective, does this raise?

A A number of issues in respect of occupation/use of the outlets, consideration of the type of patient as clinical colleagues focus, correctly on patients and in pressured situations clinical colleagues may not always be focussed upon whether these outlets are being utilised, regardless of flushing records and electronic requests for little used outlets. This design presents challenges in respect of staff getting access within a very busy environment to monitor, repair, etc. Better design may have facilitated access to pipework and systems from outwith the room.

227. How does QEUH compare to other locations in your experience?

A Whilst being a challenging incredible new hospital building providing essential services sometimes traditional or thoughtful design proposals can assist/eliminate risk. However, there is a need to approach individuals who are experienced and possess the necessary skills to contribute to good design and ultimately impact safety in and around buildings.

228. What challenges are posed by the increased number of outlets?

A Patient risk, main hospital providing vital services to a large number of patients, particularly on the back of closing and decommissioning of other hospital sites, no asbestos within the environment, water flow challenges, flushing, access, repairs, HAI Scribe consideration/actions, shear number of outlets to monitor, repairs, replacement taps which significantly increase costs, PPM maintenance costs/access and related budgetary impacts for the public purse for instance.

229. How did you address these? What options were available?

A Worked on HAI Scribe 3 classes of risk, such as low, medium and high, assisted in plans related to replacing a number of outlets, ensuring there was a records database as it is important to understand what assets are in place before mitigation works, etc are proposed/actioned. Influenced the creation of sentinel points (taps of interest) which should have been created prior to construction, but there are difficulties with knowing what service will go where in respect of occupancy, influenced the photographing and recording of actions being closed down in respect of repairs, provided some contact details of contractors I had previously worked with in respect of water systems. Regularly reviewed SHTM documentation and interpretation for many staff involved in the QEUH. Assisted with Scottish Water's contraventions' compliance requirements. Created deadleg registers, assisted and worked in incident plans, assisted and supported staff during subsequent AE Audits, created an implementation plan and subsequent auditable record, created a Smartsheet deadleg register, created a confined space document register example for use across the Board, created, maintained and monitored all training, course, records in respect of all staff across the Board in respect of water systems, created water asset registers, equipment registers, created a COSHH document centre, worked with Infection Control to establish a hydrotherapy and Spinal Pool record for the Board, established a calibration certificate for thermometers location and many other records to enable Audits to be evidence to support operational staff, Management and the Board, developed and worked on the WS01a flushing record to support staff with Infection Control and an Assistant Head of Estates, chaired, steered and

supported all sector water safety groups, reported concerns/information back to the Board Water Safety Group, provided risk assessment advice/information/guidance in respect of water systems, provided regular and continued support to all individuals, worked with and supported staff in respect of monitoring systems, created an electronic flushing record system and HAI Scribe Smartsheet page for records and communication improvements and operational staff across the Board and a number of other works as this list is not exhaustive.

Monitoring

230. What measures were in place to monitor the functioning of the water system at QEUH?

A BMS

231. Were those in your view appropriate?

A No, this is a complex water system requiring systems, response mechanisms, a holistic approach overall for example. I have attended a number of design meetings with experienced and professional designers within the Healthcare environment and many designers do not understand the requirements for healthcare professionals to deliver services, therefore the chances of delivering a building not fit for purpose can be the result. There are minimum Building Standards, but there are greater needs in respect of a healthcare environment which are unique to this particular environment.

232. Were they properly used?

A Not initially.

233. What challenges would arise from the use of additional methods of monitoring?

A Response, alert procedures.

234. Please comment on the challenge thereby posed to staff at QEUH.

A Significant numbers of alarms and numbers of staff that did not reflect adequate response capability.

235. Please comment on the potential of sampling as a method for water control.

A GG&C did not advocate routine sampling via the Water Policy, as there was a number of criteria that was required to result in sampling.

236. Was this used at QEUH?

A Compliance with the Policy was acknowledged at the QEUH.

237. In your view, was the extent of sampling appropriate?

A For a new building, new occupation, etc no.

Chemical Treatment

238. Please comment on the use of chemical treatment as a method of controlling safety of the water system at QEUH?

A Useful.

239. In your view, was this method adequately used?

A Initially no.

240. Please comment on any deficiencies in what was done.

A Monitoring system deficient initially.

241. Please comment on what other approaches you would consider to have been appropriate, and why.

A Training courses, contractor management.

242. What challenges would have arisen, had another approach been taken.

A Awareness, competency and responsibility.

Taps

243. Are you able to comment on any specific issues regarding taps at QEUH, before your arrival there?

A There were issues in respect of degrading the existing taps in respect of the chemical dosing from memory.

244. Are you able to comment on the following features of taps at QEUH:

a) Point of use filters

A Compatibility of tap types and being able to fix point of use filters were a challenge.

b) Flow straighteners

A There were challenges in respect of flow straighteners which can harbour microbiological risk if not replaced regularly or cleaned regularly they can represent risk to immune compromised individuals. There is also pseudomonas information and specific Health Facilities Scotland guidance which states no testing in Scotland, but testing within areas with flow straighteners. Steps were taken to remove any flow straighteners from high-risk areas at the QEUH and incorporate point of use filters. Other areas across the Board involved replacing the straighteners every 3 months which presents conflicting advice in respect of one Board and no uniform interpretation.

245. Flow straighteners were a feature of a 2012 pseudomonas outbreak in Northern Ireland. Please comment on your knowledge of this.

A This was the tragic case of 3 babies dying in the Royal in Londonderry of pseudomonas bacterial infections in January 2012. There can be common contamination sites such as tap spouts, aerators, hot water valve seats and showers which can pose a significant risk to immune-compromised individuals and particularly neonates and sick children within the RHC.

246. What implications did this or ought this to have had for the water system at QEUH?

A The implications were very negative.

247. In your view, was this properly taken into account.

A I think there has been significant learning from a number of healthcare environments that we need to take into account and many are devasted about the incidents that have occurred within GG&C, but we must devise ways of ensuring individuals involved in construction projects and staff maintaining healthcare sites know and understand risk and pathways of infection and I appreciate this is what NHS Assure are trying to embed at present.

248. Are there any other features of the taps at QEUH on which you would like to comment?

A Taps are still an ongoing challenge and consideration throughout healthcare in terms of specifying the correct fit for purpose outlet and we must ensure a standard is enforced for safety moving forward.

Resource Issues

249. Are you able to comment on whether budget was a factor in the choices made in designing and building the water system at QEUH, and what implications this may have had on its safety?

A From meetings and conversations in relation to this question I understand there were a number of challenges that staff faced in terms of pressure to complete and open the new building and with having a construction background I asked a number of questions when I started in my new post about a number of construction related questions. For instance, a plan and schematic detailing the sentinel and representative/points of interest would have been really useful, a plan detailing sampling and recommended sample/legionella/pseudomonas risk points would have been useful, a number of BMS points, someone/Clerk of Works overseeing the construction works, but I remember being told that savings had to be made in terms of

budget. I do appreciate that this has been the largest Hospital built in Scotland and there are so many useful design and practice lessons for all.

250. Are you able to comment on whether budget was a factor in the safety of the water system at QEUH during your time there?

A Budget is always a factor within the Healthcare environment from my observations and experience, however, when presented or having identified a risk, these risks can be acknowledged by the Responsible Persons and added to the risk register for future budgetary purposes, but that initial process/conversation needs to take place.

251. How was the cost of operating the water system, during your time at QEUH, affected by the issues discussed above, such as design choices, allocations of responsibility, and knowledge and implementation of prior assessments of its safety?

A From my observations there were significant pressures upon individuals to react/respond to issues at the QEUH and when you are dealing with design choices there are often significant time pressures which reflect against choice. For example to be able to take a step aside and consider that this design is unlike any other before it in respect of the total number of outlets which equates to risk alone is a challenge, to ensure that all involved with design and operations have an knowledge, skills, experience and opportunity to take into account what is coming to them to manage shortly and how to start to address these challenges is unprecedented.

252. Were appropriate resources allocated to the areas necessary to enable the operation of the water system in a safe manner?

A Taking into account the incidents which have resulted no.

253. Specifically, please comment on whether Estates were allocated an appropriate budget for this task.

A No.

Reporting Issues

254. Several sections above address allocation of responsibilities and lines of reporting at QEUH. In your experience, did those arrangements operate in order to enable the raising of any concerns about the water system?

A No.

255. Were those arrangements in fact used for that purpose?

A Difficult to answer as I have not been aware of all individual conversations.

256. Were they used as extensively as they ought to have been?

A No I think we are working together across the Board more effectively now.

257. Were there obstacles to their use?

A There can be a number of barriers/challenges within the NHS environment.

258. Where they were used, did they lead to appropriate action?

A In response to a number of actions yes.

259. In practice, did such structures operate properly, in your view?

A Structural operations could have been improved.

260. Outside of those formal structural arrangements, was it possible for other persons at QEUH to raise concerns?

A There were possibilities/opportunities to raise concerns.

261. Were concerns raised with you personally?

A Yes.

262. Are you aware of concerns being raised with others?

A Yes.

263. Are you able to comment on whether such raisings of concern were effective?

A I think concerns within GG&C are and can be effective, however whether I consider my concerns were acted upon in a timely fashion is another factor.

264. Where this was done, did it lead to appropriate action?

A QEUH, more staff to facilitate/accommodate/cover actions.

265. Were there obstacles to raising concerns?

A I am not aware of obvious obstacles.

266. Please give examples where you are aware of difficulties arising?

A There were significant gaps in the Legionella Management, high risk considerations, dead legs, flushing, isolation valves, service contracts, emergency procedures, etc as detailed in the Water Systems Audit at the QEUH.

267. Are you aware of difficulties in raising concerns around the time of the closure of the Schiehallion unit?

A I was aware that wards 2A and 2B closed through the media.

268. Who suffered from such difficulties in reporting these, and other, concerns?

A Patients.

269. What difficulties arose?

A I understand there were concerns over bacteria in the water systems and ventilation system upgrade requirements.

270. In such cases, were the attempts to raise concerns effective?

A I cannot answer sorry.

271. Did they lead to appropriate action?

A I am not fully aware of all the actions taken.

272. In your view did QEUH in practice have proper arrangements to enable the raising of concerns?

A Not fully aware of arrangements now in place sorry.

Conclusion

273. Looking back, how would you assess your time at QEUH?

A Extremely busy.

274. Are you pleased that you took the role?

A Yes.

275. Do you regret taking the role?

A No.

276. How effective would you assess your involvement to have been?

A Not as effective as I would have liked.

277. How much improvement were you able to see in water matters at QEUH?

A Significant.

278. Which aspects would you assess to still have required improvement?

A Resilience aspects.

279. Which aspects were you able to contribute to the most?

A Water safety and compliance.

280. Please comment on any other matters which seem to you important.

A I appreciate this Inquiry is very important and please note that every effort has been taken to complete these answers. However please also note that at present I am presently covering 82 sites in the absence of my colleague (currently on sick leave) and Senior (currently on annual leave), therefore I am very busy currently fulfilling the operational support role and it is not always

easy to take complete time away from these duties. I have genuine sadness, concern in respect to the deaths, illness, pain and suffering which has been caused to patients and staff and hope no further incidents occur in the future.

Declaration

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

282. The witness was provided the following Scottish Hospital Inquiry documents for reference when they completed their questionnaire statement.

Appendix A

A48079747 – Bundle 6 – Miscellaneous documents
A48077959 – Bundle 11 – Water Safety Group

Scottish Hospitals Inquiry

Witness Statement of Questions and Responses

Laura Imrie

This statement was produced by the process of sending the witness a questionnaire with an introduction followed by a series of questions and spaces for answers. The introduction, questions and answers are produced within the statement.

Professional History

1. Full name

A. Laura Jane Imrie

2. Please list your professional qualifications, with dates?

A MSc Infection Prevention & Control University of Highlands and Islands 2007-2011; BSc Nursing with Specialist Practitioner Infection Prevention & Control University of Dundee 1999 – 2002; Registered General Nurse Lanarkshire School of Nursing 1990 – 1993

3. Please give your chronological professional history, roles held, where and when- please also provide an up-to-date CV?

A. Registered General Nurse Lanarkshire School of Nursing 1990 – 1993; Staff Nurse NHS Lanarkshire, NHS Lanarkshire, Hairmyres Hospital, Lanarkshire Scotland 1993 -1997; Infection Surveillance Nurse NHS Lanarkshire, Hairmyres Hospital, Lanarkshire Scotland 1997 – 2000; Infection Prevention & Control (IPC) Nurse NHS Lanarkshire, Monklands Hospital, Lanarkshire Scotland 2000 – 2002; Senior Infection Prevention & Control Nurse NHS Greater Glasgow Victoria Hospitals, Glasgow Scotland 2002 – 2007; Lead Infection Prevention & Control Nurse NHSGGC West Sector, Glasgow Scotland 2007 – 2012 ; Nurse Consultant Infection Prevention & Control NHS National Services Health Protection Scotland, Glasgow Scotland 2012 – 2018;

Interim Lead Consultant Healthcare Associated Infection (HAI) Group Health Protection Scotland 2018- 2019; Lead Consultant HAI Group Health Protection Scotland (HPS) 2019- 2023; Clinical Lead NHS Scotland Assure 2023 – Present.

4. What specialist interest / expertise / qualifications in any area of Infection control do you hold? E.g., hospital ventilation, water Legionella control and infection control related to the built environment, and epidemiology and outbreak management.

A. I have practiced for 27 years in the field of Infection Prevention and Control, serving in various roles across local NHS Boards and the National Infection Prevention & Control body (HPS/ARHAI). Through these positions and continued learning, I have acquired extensive knowledge, skills, and experience in the field of Infection Prevention and Control, Healthcare Associated Infections. I hold an MSc in Infection Prevention & Control and a BSc with a Specialist Practitioner Infection Prevention & Control qualification.

<u>Infection Control Team and the Role of Health Protection Scotland (HPS)</u>

5. Can you explain the respective roles within the infection control framework of:

a) The Microbiology department?

b) Estates and Facilities?

c) Public Health; and

d) External experts (i.e., Public Health England)?

A. Roles:

a) The Microbiology Department, including Microbiologists, work alongside Infection prevention and Control (IPC) specialists and they play a key role in finding, diagnosing, and keeping track of infections in healthcare settings; performing appropriate tests to support diagnosis and outbreak management; offering guidance and support to clinical and IPC teams; engaging in research to better understand pathogens and treatments.

b) Estates and Facilities Role: Estates and Facilities are responsible for maintaining a safe, well maintained and hygienic environment within healthcare settings. Through application of national guidance and legislation.

c) Public Health Role: Public Health departments play a crucial role in the broader context of infection control, focusing on the prevention and control of infections within the community. Through policy development, vaccine plans, education and training, surveillance and reporting and outbreak management.

d) External Experts (e.g., Public Health England) Role: External experts, such as those from Public Health England (PHE), offer specialised knowledge and resources to support infection control efforts through specialised roles, services or intelligence.

6. Can you describe:

a) The role of HPS in respect of advice, assistance, and expertise?

A. Health Protection Scotland (HPS) came into being on 1 April 2005. It was responsible for coordinating health protection in Scotland, including protection against the spread of infectious disease. Although HPS no longer exists, the part of it expected to be most relevant to the Inquiry – Antimicrobial Resistance & Healthcare Associated Infection (ARHAI) – remains part of NSS. NSS provides shared services and expertise at national level to bodies associated with NHS Scotland. Functions of the organisation can be found in the National Health Service (Functions of the Common Services Agency) (Scotland) Order 2008. For clarification the HAI Group within HPS are now ARHAI Scotland (April 2020). Although part of HPS, the HAI Group were distinct with a different Scottish Government (SG) sponsor and stakeholders, given that the primary focus of ARHAI is healthcare.

ARHAI Purpose: We coordinate the national programmes for IPC and Antimicrobial Resistance (AMR), support local NHS Boards, other national bodies and stakeholders in the implementation and delivery of these key priority programmes to reduce the overall burden of infection and antimicrobial resistance in line with nationally agreed priorities.

ARHAI Role: We provide expert intelligence, support, advice, evidence-based guidance, clinical assurance and clinical leadership to local and national government, health and care professionals, the general public and other national bodies with the aim of protecting the people of Scotland from the burden of infection and antimicrobial resistance. As the national organisation responsible for IPC and AMR, we liaise with other UK countries and international counterparts in the delivery and development of these national priority programmes. ARHAI Scotland's Functions: The work of ARHAI Scotland is underpinned by delivering a wide range of functions, working with stakeholders across health and care and beyond to fulfil these functions: surveillance and monitoring of infections and antimicrobial resistance to assess their impact on health; co-ordination of national infection prevention and control and antimicrobial programmes; expert IPC/AMR advice; horizon scanning to enable effective preparation and response to HAI outbreaks and incidents; supporting the ongoing development of a confident, knowledgeable and competent IPC workforce in collaboration with NHS Education for Scotland and enabling good professional practice research and innovation to provide evidence for action develop and maintain national evidence-based IPC guidance for Scotland.

b) The role of HPS in HAI reporting (HIIATs etc)?

A. National guidance for reporting infection related incidents is detailed within Chapter 3 of the National Infection Prevention Control Manual (NIPCM). The alert organism/condition list within the NIPCM details the minimum list of organisms and conditions which should alert Infection Prevention Control Teams (IPCTs) to their occurrence allowing them to consider whether further investigation is required. The Hospital Infection Incident Assessment Tool (HIIAT) should be used by the Infection Prevention and Control Team ("IPCT") to assess every healthcare infection incident i.e. all outbreaks and incidents (including decontamination incidents or near misses) in any healthcare setting.

The scoring system is used to assess the impact of the incident or outbreak and results in a RAG (Red, Amber, Green) rating which determines the

reporting and communications requirements including the frequency of reporting throughout the incident or outbreak. IPCTs must complete a Healthcare Infection, Incident and Outbreak Reporting Template (HIIORT) for submission to ARHAI Scotland for all incidents.

If an incident is assessed as amber or red, ARHAI Scotland (HPS) then share this information with SGHAIPU. If an incident is scored as green then the HIIORT is submitted to ARHAI Scotland (HPS) for information purposes only, unless assistance from ARHAI Scotland (HPS) is requested in which case an update for Scottish Government Healthcare Associated Infection Policy Unit (SGHAIPU) is provided. The HIIORT describes the information required for submission to ARHAI Scotland. There are a number of data specific fields as well as open fields for descriptive narrative describing the incident, investigations undertaken and controls in place.

This reporting form has been designed by ARHAI Scotland to ensure that the appropriate information required to provide assurances to SGHAIPU is received as well as to develop a national epidemiological evidence base and yield lessons learned for sharing nationally. It is not possible for ARHAI Scotland to evidence whether NHS Boards report all incidents, outbreaks and data exceptions detected by local surveillance systems as ARHAI rely on NHS Boards to follow NIPCM guidance and have no role in identifying local outbreaks and incidents.

c) The role of HPS when the National Framework is activated?

A. Extract from the National Framework document **3246 ARHAI Narrative – V1.0 A34042016. (A37706719 – 1_national-support-framework-2017 - Bundle 27, Volume 4, Document 15, page 161)** "When the Framework has been invoked by SG HAI/AMR Policy Unit, HPS will:

a. Contact the NHS Board within one working day and agree initial actions to determine if sufficient actions have been planned to support NHS Board improvement.

b. Produce a written assessment – healthcare infection situation needs assessment - within 5 working days of any invocation. This will be sent to SG HAI/AMR Policy Unit and appropriate NHS Board Executive lead or deputy for information.

c. If requested or considered necessary, as part of HAI situation needs assessment, arrange a visit to the NHS Board. This visit will take place within 10 working days of invocation. The NHS Board should be informed of all urgent recommendations on the day of visit either verbally or written.

d. Send a written report of the visit to the NHS Board within 5 working days. The NHS Board will have 2 working days to respond before HPS forwards the agreed report to SG HAI/AMR Policy Unit and the NHS Board. The report should be sent to SG HAI/AMR Policy Unit within 10 working days of the visit. Any variation in timeline will be agreed on behalf of SG HAI/AMR Policy Unit by HPS.

e. Contact other national agencies e.g. Health Facilities Scotland (HFS), Healthcare Improvement Scotland (HIS), HEI to request support or clarification if required.

f. Support the NHS Board until all actions is completed, identifying any gaps in national guidance and tools as appropriate.

g. Support the board with management of any/all subsequent incident(s)/outbreak(s)/data exceedance within the same ward/area that occur while the original incident(s)/outbreak(s)/data exceedance is still under investigation.

h. Report any failures to complete actions as planned/agreed to SG HAI/AMR Policy Unit and appropriate NHS Board Executive Lead.

i. Agree/confirm with SG HAI/AMR Policy Unit when the incident is closed and lessons to reduce risk have been made and/or update SG HAI/AMR Policy Unit on any residual risk/incomplete actions.

j. Consider the need to share lessons with NHS Scotland and other stakeholders.

d) The lines of communication between HPS and SG, including when the National Framework is activated?

A. As per Chapter 3 NIPCM 3.2.3 **(A42378956 – National National Infection Prevention and Control Manual - NIPCM - NHS NSS - Version last updated 4 October 2021 (contains references to a relaunch on 11 July 2022 and the copy being generated on 2 February 2023) Bundle 27, Volume 4, page 165)**

a. Following the PAG/IMT, the NHS Board is required to communicate all HIIAT Green, Amber and Red assessments with ARHAI Scotland, by completing the electronic Outbreak Reporting Tool (ORT) within 24 hours of HIIAT assessment.

b. Exported MS Excel files must be emailed to ARHAI Scotland for processing – the “Export Data File for ARHAI” button within the ORT only saves the extract from the ORT into the folder. Extracted data files should be emailed to the ARHAI Scotland ICT mailbox.

c. The Protocol for the Reporting of Healthcare Infection Incidents, Outbreaks and Data Exceedance in NHSScotland through the Outbreak Reporting Tool (ORT) is available in the resources section of the NIPCM.

d. For incidents/outbreaks that are HIIAT assessed as Red, Amber or Green, frequency of updates are as follows:
HIIAT Red – review, update and submit a daily update.
HIIAT Amber– review, update and submit a twice weekly update.
HIIAT Green – review, update and submit a weekly update.

e. The Healthcare Infection Incident and Outbreak Reporting Template (HIIORT) form is for any HIIAT Red, Amber or Green assessed incident/outbreaks. Incidents assessed as Red, Amber or Green, where ARHAI support is requested, will be reviewed for onward communication to the Scottish Government Healthcare Associated Infection Policy Unit.

f. Respiratory incidents/outbreaks associated with key respiratory pathogens (COVID-19, influenza and respiratory syncytial virus (RSV)), should be completed within the Respiratory Short Form. However, where IPC measures do not align with the outbreak checklist and NIPCM, or where ARHAI support is requested, a full HIIORT form must be completed. The Outbreak Checklist is available in the resources section of the NIPCM website.

g. COVID-19 reporting should now align with reporting for other key respiratory pathogens (Influenza/RSV).

h. Any adverse event related to equipment or medication must be reported as soon as possible (within one working day) to the Incident Reporting and Investigation Centre (IRIC) and the escalation/de-escalation flowchart followed."

i. Out with the National Framework ARHAI may escalate to Scottish Government via HAI Policy Unit around emerging national threats, alerts or issues.

e) The extent of SG supervision / coordination / control, especially with regard to the SG HAI Policy Unit?

A. ARHAI Scotland has a close working relationship with the Chief Nursing Officer Directorate (CNOD) HAI Policy Unit (HAIPU). ARHAI develops its annual workplan each year in September and CNOD are given an opportunity to review. CNOD routinely provides requests for additional work to be considered. CNOD also develops and publishes the Scottish Government

Healthcare Associated Infection (HCAI) Strategy. Many projects within the Strategy are delivered by ARHAI Scotland on behalf of HAI Policy Unit.

f) SGHAIPU form part of the ARHAI Senior Management meetings (every second month), where delivery plans, workforce, reactive requests and risks are discussed.

A. In my experience as Clinical Lead for ARHAI, SG supervision of incident and outbreak reporting is dependent on the information and assurance required by the individual Cabinet Secretary for Health in post at that time. The level of support and oversight SG require ARHAI to provide to NHSBoards for individual incidents is also dependant on the CNO in post.

g) What were your impressions of the GGC infection control team between 2015 and 2019?

I. Were you aware of any of the following:
II. existing tensions?
III. lack of clarity around roles and decision making?
IV. relationships (i.e. between ICM and ICD)?
V. culture and bullying; and
VI. attitude of senior management and board to infection control issues?

A. From 2015 to 2018 I had very limited dealings with the IPCT within NHSGGC, as my role was primarily around coordinating the national HCAI surveillance programme. I only supported reactive board incidents work to cover annual leave or support Nurse Consultant colleagues as required.

In 2018 I became involved in supporting colleagues with the reactive work in NHSGGC and later that year I took up the post of interim lead for ARHAI and became more involved at that stage.

During 2018 – 2019 I was aware of tensions between some members of the NHSGGC IPCT. Also, there appeared to be tensions between some members of the NHSGGC IPCT and the NHSGGC management.

HPS/ARHAI Nurse Consultants supporting the NHSGGC IMTs (August-September 2019) relating to the water incident reported tensions and requested that they did not attend IMT meetings alone. A Nurse Consultant typically attends NHS Board IMT meetings on behalf of ARHAI and additional support from other disciplines within ARHAI is requested as needed. However the Nurse Consultants that had been supporting the incidents within NHSGGC reported that these IMT felt hostile and that there was a feeling that some members of NHSGGC were becoming frustrated at the ARHAI team questioning and the amount of corrections the ARHAI team were feeding back on the minutes of the meetings.

The Nurse Consultants requested the meetings were recorded to resolve the issue of having to spend so much time at the IMT discussing the minutes of the previous meeting, however the chair was unable to accommodate this request. Both Nurse Consultants feedback was that the membership and roles of the IMT had become unclear, with many meetings being top heavy with Director level clinicians and management. Therefore, to support the ARHAI Nurse Consultants thereafter, where possible, the IMTs were attended by two members of the ARHAI team.

During 2019 I was contacted anonymously by two separate whistleblowers who were members of staff from QEUH, which also suggested there were tensions.

In August 2019 I received an email from a whistleblower reporting issues relating to the management of the water incident. Items 5302 and 5304 and 5306.
(A46157856 - Email from C. Peters to L. Imrie re Meeting re Ventilation – 16 August 2019 – Bundle 27, Volume 4, Document 17, page 209)
(A49815692 – 5304 - 2019-08-16 17.10 RE_ Confidential_Redacted – Bundle 27, Volume 5, Document 15, page 37)
(A49815710 5306 - 2019-08-16 19.00 Re_ Confidential_Redacted –Bundle 27, Volume 5, Document 16 page 38)

The Whistleblower highlighted they had concerns about infection control within NHSGGC. Stating:

- “real lack of support, and indeed undermining” of the chair of the IMT managing infection related incidents.
- “information has been denied” or “false accounts given by high level managers.”
- “senior management has distanced itself from the water incident and there is a “nothing to see here attitude” with key agreed actions from the IMT not carried out without discussion with the chair of the IMT.”
- “I have no confidence in internal systems of escalation.”

This was escalated to CNOD HAI Policy Unit and NSS Executive Lead for Whistleblowing and the NSS Medical Director. The Whistleblower did not wish to escalate through NHSGG Executive Lead and did not wish for their details to be shared with NHSGGC. Item 5307. **(A49815731 5307 - NHSGGC - anonymous whistleblower – Bundle 27, Volume 5, Document 7, page 24)**

The member of staff contacted ARHAI in December 2019 wishing to raise concerns about IPC in the infectious diseases unit. Item 5314 **(A49816008 5314 - 2019-12-30 14.23 - Re FW Queen Elizabeth Hospital Glasgow - Infection concerns Redacted - Bundle 27, Volume 5, Document 17, page 40)** I responded highlighting the NHS Scotland Whistleblowing Policy which directs them in the first instance to raise internally within the NHS Board, however they responded:

“I do not feel comfortable nor safe raising this internally, nor do I wish to contact the whistleblowing helpline. Whistleblowers are treated terribly within our organisation. I hope you use this information to bring about a safer environment for patients. Thank you for your time, I do not wish a response to this email.”

I escalated this communication to NSS Executive Lead for Whistleblowing who in turn contacted NHSGGC. The NSS Executive Lead received a

response from the NHSGGC Executive Lead for Whistleblowing which included information that the same concerns had been reported to Healthcare Improvement Scotland (HIS) who had carried out an investigation. HIS confirmed that they had carried out an investigation and had completed and closed the investigation. Items 5315, 5316 and 5317.

(A49816032 5315 - Fwd whistleblowing concern raised with NSS re the QEUH ID unit ventilation – Bundle 27, Volume 5, Document 14, page 34.

A49816071 5316 - FW whistleblowing concern raised with NSS re the QEUH ID unit ventilation Bundle 27, Volume 5, Document 1, page 4.

A49816137 5317 - Fwd whistleblowing concern raised with NSS re the QEUH ID unit ventilation Bundle 27, Volume 5, Document 2, page 13.

20200121 NHS GGC close letter 2.0 Bundle 27, Volume 5, Document 2.1, page 13)

h) Record keeping- did you take part in this? If so, please describe your role?

A. I did not take part in NHSGGC record keeping.

<u>Scottish Surveillance Healthcare Associated Programme (SSHAIP)</u>

7. Scottish Surveillance Healthcare Associated Programme (SSHAIP):

a) In relation to SSHAIP, please explain what SSHAIP is, who is involved and when it was established?

A. Scottish Surveillance of Healthcare Associated Infection Programme (SSHAIP) was a team within the Healthcare Associated Infection Group of HPS, which coordinated the national HAI surveillance programme for NHS Scotland. This has since been replaced with the Data and Intelligence Team within ARHAI Scotland. Note - HPS has not existed since April 2020.

b) What are the aims of SSHAIP?

A. The programme was set up to coordinate the HCAI surveillance across NHS Scotland. The programme aim was to monitor data collected by the NHS Boards by quarterly analysis and publication of quarterly HCAI surveillance data. Set out in HDL (2006) 38. **(A49683792 – Revised Framework for**

National Surveillance of HAI in Scotland – Bundle 27, Volume 3, Document 28, page 534)

c) How are those aims achieved?

A By coordinating the national HAI surveillance programme, monitoring and reporting.

d) To what extent do you think SSHAIP is/has been effective?

A. The context for evaluation of effectiveness is not made clear within this question.

Infection Control at QEUH 2015 to 2016

8. In relation to Infection Control at QEUH from 2015 to 2016: -

a) Please describe the routine support you provided to IC at QEUH from 2015 to 2016.

A. I did not provide any routine support.

b) Were you aware of any issues arising in relation to Ward 4B, the Adult BMT Unit, which led to the decant of the ward to the Beatson? If so, what was your understanding of the issues?

A. I was aware that NHSGGC requested support regarding assessment of Ward 4B BMT unit, due to concerns that the ward specification was not appropriate for the patient population. I am aware that Annette Rankin and HFS supported this request.

c) Were you aware of any issues with Wards 4C? If so, what was your understanding of the issues?

A. I was not personally involved. Through internal communications I had some understanding of incidents reported by colleagues, however that would have mainly been through verbal updates at weekly team meetings or through communication/escalation emails shared by the supporting consultant.

d) When did you first become aware that the ventilation in Wards 4B and 4C was not to the standard laid down in STHM 03-01?

A. I am unable to recall when I was made aware of this or how I was made so aware, as I was not directly involved in supporting the incident.

e) Would you have expected the design of the ventilation system to comply with SHTM 03-01, the national guidance?

A. Yes.

f) Would you have expected to be told if the ventilation system did not comply with SHTM 03-01?

A. I would have expected HFS to have been informed or consulted for advice regarding any derogations.

HAI Infections in 2015

9. Can you recall HPS being alerted to any HAIs in 2015?

A. There is no requirement for NHS Boards to report all HAI to HPS/ARHAI. Furthermore, prior to April 2016 there was no requirement for NHS Boards to report Green HIIAT assessed incidents into HPS. From the records I have reviewed there were two incidents reported.

a) If so, can you recall:

i) What was the nature of the infection?

A. Incident 1 - Serratia Blood Stream Infection/colonisation NICU.
Incident 2 - Clostridioides difficile (previously known as Clostridium difficile) infection (CDI) - various areas.

ii) Was a link to the built environment suspected and if so, in what respect?

A. Incident 1 - Possible link.
Incident 2 - No environmental link.

b) In what area of the hospital did the infection(s) occur?

A. Incident 1 - Neonatal Intensive Care Unit (NICU).
Incident 2 - Various areas.

c) What sampling / testing was conducted and was a link confirmed?

A. Incident 1 – No mention of environmental sampling in documents reviewed.
Incident 2 – No environmental testing recorded.

d) At what stage did HPS get involved?

A. Incident 1 - NHSGGC reported a neonatal death associated with Serratia to the out of hours HPS consultant on 31st October 2015. There was found to be an increased incidence of Serratia within this patient population over the previous 5 months. ARHAI (HAI HPS) picked this up on Monday 2nd November 2015, on the same day as Scottish Government HAIPU invoked the National Framework.
Incident 2 – No involvement

e) What, if any, external reporting occurred?

A. Incident 1 - NHSGGC reported the incident to HPS as a RED HIIAT and, in accordance with Chapter 3 NIPCM, the incident was reported to Scottish Government. Thereafter, reporting was through the communication described in the National Framework.
Incident 2 – HIIAT Green no support requested therefore no reporting.

f) Was there a PAG or an IMT?

A. Incident 1 - Yes, an IMT meeting was held and attended by ARHAI.
Incident 2 – No, ARHAI support requested.

g) What control measures were put in place?

A. Incident 1 - From review of the documents many of the controls were around hand hygiene, cleaning, and prevention of cross transmission between human to human.
Incident 2 – Unknown

h) Whether prophylaxis was administered?

A. I am unaware of the clinical treatment and therefore unable to answer.

i) Were the actions taken sufficient to respond to the incident?

A. Incident 1 - In hindsight perhaps not as further Serratia clusters were reported July 2016 and February 2017 within NICU.
Incident 2 – Unknown.

j) Can you comment on the effectiveness or otherwise of the IMT?

A. I did not attend the IMT, therefore I am unable to comment.

Emerging Issues with the Water System

10. What can you tell us about emerging issues with the water system? Please describe specific concerns with the water system as they emerged. In relation to each concern can you explain:

a) When did the concern arise?

A. I was not directly involved and I would refer to the documents previously submitted:

1 HPS NSS initial report on findings of water contamination and recommendations QEUH/RHC May 2018 Final Report **(A44247022 - Bundle 7, Document 1, page 3)**

2 HPS Report Water Contamination Summary of Incident and Findings - December 2018 **(A44247015 - Bundle 27 – Document 2, page 32)**

3 HPS draft Report GGC Situational Assessment RHC Wards 2a 2b - 5 June 2019 **(A40732035 - Bundle 7, Document 5, page 194)**

b) What was the nature of the concern – specifically what was thought to be wrong with the building system in question?

A. Contaminated water system.

c) At what stage did HPS become involved?

A. 16 March 2018.

d) What was the nature of the risk posed to patient safety and care?

A. Increased risk of infection.

e) What action, if any, was taken?

A. System flushing on several occasions, continuous dosing of water system with Chlorine dioxide, point of use filters on water outlets (which I understand are still in place) and ultimately the refitting of ward 2A/2B.

f) Was any action taken sufficient to address the concern?

A. This incident involving the paediatric haemato-oncology patient population resulted in a major refit of the unit. Since March 2022, when the paediatric haematology returned to the refitted unit, at the time of writing no incidents have been reported to ARHAI from NHSGGC relating to this patient population.

11. In particular, was HPS involved in any of the following issues:

a) Water temperature: problems with energy plants – hot water temperatures are not high enough to prevent/tackle bacterial growth.

A. HFS would have been the national body to lead on any issues relating to hot water temperatures. I do not recall HPS being involved.

b) Thermal control design system?

A. I do not recall HPS being involved.

c) Flow straighteners / regulators / tap type?

A. Support was sought from HPS by GGC in March 2014. Taps installed on all clinical wash hand basins across both adult and children's hospitals, (manufacturers Horne) were no longer compliant with SHTM 04-01 or newly issued HPS guidance as they contained flow regulator. Flow straighteners had been cited in the Northern Ireland neonatal outbreak as a causative factor. To

address this enquiry HPS sought support from Health Facilities Scotland (HFS), Public Health England, NHS Forth Valley and NHS Lothian.

Following discussions and review an SBAR produced by HPS on 9 April 2014 with 3 options (below) and submitted to GGC on 9 April 2014 **(A37746908 - SBAR dated April 2014 – Pseudomonas – Removal of Flow Straighteners from taps - Bundle 3, Document 1, page 5):**

1. Instruct the contractor to install the procured taps in all clinical areas across the hospital after removing the flow straighteners (relinquishing the two-year warranty on the taps).
2. Instruct the contractor to install the procured taps without flow straighteners in the high-risk units only (relinquishing the two year warranty on the taps in those areas).
3. Instruct the contractor to install new compliant taps (without flow straighteners) in the high-risk units only.

HPS recommended NHS GG&C to progress with option 2 or 3. HPS and HFS provided support.

d) Debris in pipes?

A. I do not recall HPS being involved directly. Discussions may have taken place at IMT.

e) Single room design – water outlets increased; flushing regimes; risk of stagnation?

A. I do not recall HPS being involved.

f) Pipe size and storage volumes; encourages water stagnation?

A I do not recall HPS being involved.

g) Wet rooms and floor levels?

A. I do not recall HPS being involved.

h) Drainage system?

A. I do not recall HPS being involved.

DMA Canyon Reports

12. Are you aware of the DMA Canyon Reports? When were you first made aware them? How did this come about?

A. I became aware of the reports through a colleague, Annette Rankin, who was supporting the water related IMT. I cannot recall when this occurred.

13. Some witnesses (e.g. Dr Christine Peters) have said that, had they had sight of the 2015 report at the time, they would not have allowed the hospital to open. Do you agree?

A. Considering the findings of the report I would have expected an action plan for resolution to have been in place and for the reports to have been discussed with HFS. The information within the reports could have supported some of the earlier investigations into the increased and unusual infections/isolates being reported.

Gram Negative Bacteraemia in 2016

14. Was HPS involved in any of the following incidents? If so, can you recall:

a) Aspergillus cases in June 2016?

A. For clarity, Aspergillus is not a Gram-Negative Bacteraemia (GNB). No HPS support was sought from NHSGGC. Incident reported into HPS as Green HIIAT, therefore only limited detail was shared.

b) Was a link to the built environment suspected and if so, in what respect?

A. Limited detail shared within the HIIORT report submitted to HPS, however NHSGGC stated in the HIIORT that it had developed an action plan, “for repair issues identified.”

c) In what area of the hospital did the infection(s) occur?

A. ITU June 2016.

d) What sampling / testing was conducted and was a link confirmed?

A. No sampling/testing was reported through Board update shared with HPS.

e) At what stage did HPS get involved?

A. No HPS support was sought.

f) What, if any, external reporting occurred?

A. Green HIIAT assessments are not routinely reported as per Chapter 3 NIPCM.

g) Was there a PAGs or an IMT?

A. Yes, however no HPS support was sought for attendance.

h) What control measures were put in place?

A. I do not know.

i) Whether prophylaxis was administered?

A. I do not know.

j) Were the actions taken sufficient to respond to the incident?

A. I do not know.

k) Can you comment on the effectiveness or otherwise of the IMT?

A. I do not know.

<u>Eight Cases of Serratia in August 2016</u>

15. Can you recall:

a) Was a link to the built environment suspected and if so, in what respect?

A. I did not personally support this incident, which was first reported to HPS/ARHAI on 28th July 2016. NHSGGC first reported 8 positive screening

samples (colonisation) from eight babies since 13th June 2016. On closing the incident there was a total of 12 babies' screening samples positive for Serratia 13th June 2016 – 12th September. No HPS/ARHAI support was sought, therefore the only information available is that reported through the HIIORT documentation submitted by NHSGGC. On reviewing the documents held, water and environmental testing was carried out, suggesting that one of the hypotheses may have been an environmental source.

b) In what area of the hospital did the infection(s) occur?

A. The Neonatal Unit.

c) What sampling / testing was conducted and was a link confirmed?

A. Water and environmental testing were reported as negative.

d) At what stage did HPS get involved?

A. NHSGGC did not request HPS/ARHAI support.

e) What, if any, external reporting occurred?

A. Although the NHS Board's HIIAT assessment was Green, HPS/ARHAI updated SGHAIPU about the incident due to the vulnerable patient population and the unit's status as a national referral centre.

f) Was there a PAGs or an IMT?

A. Yes, however HPS were not invited to attend.

g) What control measures were put in place?

A. From reviewing the HIIORT documentation submitted by NHSGGC and the HPS/ARHAI communications to SGHAIPU, controls recorded included monitoring of Hand Hygiene, PPE, Cleaning and antimicrobial prescribing. Transmission based precautions applied where positive patients were identified. Bathing wipes were put in place to reduce contact with water.

h) Whether prophylaxis was administered?

A. I do not know.

i) Were the actions taken sufficient to respond to the incident?

A. I am unable to comment.

j) Can you comment on the effectiveness or otherwise of the IMT?

A. HPS/ARHAI did not attend the IMT.

Cupriavidus in the Aseptic Sink

16. Can you recall:

a) What was the nature of the infection?

A. This incident was reported by NHSGGC as HIIAT Green with no support requested, therefore minimum detail was provided by NHSGGC. I am aware that the incident was retrospectively linked to a clinical sample.

b) Was a link to the built environment suspected and if so, in what respect?

A. At this time the source was thought to be the sink that was within the aseptic pharmacy. I believe the sink was removed.

c) In what area of the hospital did the infection(s) occur?

A. At the time of the investigation the source no clinical cases had been identified.

d) What sampling / testing was conducted and was a link confirmed?

A. Water sampling later confirmed a link between a clinical sample and the sample obtained from the sink.

e) At what stage did HPS get involved?

A. HPS was not asked for support.

f) What, if any, external reporting occurred?

A. Green HIIAT with no clinical cases, therefore it was not escalated.

g) Was there a PAGs or an IMT?

A. I do not know.

h) What control measures were put in place?

A. As far as I am aware, water testing was carried out and the sink was removed.

i) Whether prophylaxis was administered?

A. At this time there were no clinical samples.

j) Were the actions taken sufficient to respond to the incident?

A. I was not involved in the incident or management of controls.

k) Can you comment on the effectiveness or otherwise of the IMT?

A. No, I was not involved.

17. Can you comment on any other HAIs you were involved with throughout 2016?

A. See previously submitted ARHAI Summary of Incidents Outbreaks **(Bundle 27, Volume 3, Document 5, page 477)**

18. Please describe any issues with the built environment which arose in 2016, of which you were aware.

A. I am aware there were a number of other incidents reported through HIIAT assessment however I do not recall being directly involved in any incidents relating to the built environment within QEUH or RCH during 2016. I am aware NHSGGC requested support around the BMT specification during 2016.

a) What action, if any, was taken to resolve each issue?

A. Reviewing the possible environmental table of incidents, only two are Amber and are covered in the question set. Green incidents did not provide detailed summary of the management of the incident.

b) To what extent was the action taken effective?

A. I am unable to answer.

HAIs throughout 2017

Please see:

(A37916622 –2017-08-01 (14.09 Laura Imrie to Outbreak Group) – FW HIIORT Ward 2A RHC– attached – 01 August 2017 – Bundle 14, Volume 1, Document 65, page 686)

(A37917014 – HIIORT 01.08.17 ward 2A Strentrophomonas maltophilia Bundle 27, Volume 5, Document 18, page 43) and **(A37916213 – NHSGGC – Email L Imrie to J Ives et al – 15 November 2019 – Bundle 14, Volume 2, Document 166, page 626)**

(A37916502 – 2017 07 27 (1418 [redacted] GGC to LI HIATT RED – NHSGGC Ward 2A Royal Children's Hospital – Bundle 14, Volume 1, Document 64, page 680)

19. Regarding the Stenotrophomonas incident in 2017:

a) Although you were not the NC supporting this incident, can you describe your involvement through internal group meetings from the outset in July 2017, e.g. how did you become aware of the issue, what did you understand to be the issues, which meetings updated you, what action was taken, what action and/or advice given by HPS?

A. HPS held Monday morning meetings where there were verbal updates on all open incidents. All Consultant staff receive NHS Board updates sent to SGHAIPU for information and contingency planning.

On 26th July 2017 NHSGGC reported two patients with Stenotrophomonas bacteraemia within Ward 2A Royal Childrens Hospital NHSGGC 8 days apart. Both cases were being considered by NHSGGC to be healthcare associated infections. The cases reported were defined as invasive and had resulted in delays to treatment for patients. HIIAT assessed as Red. NHSGGC provided updates via HIIORTS which were then shared with SGHAIPU. At the time of first reporting one child was reported to be requiring additional intervention

and subsequent transfer to paediatric intensive care. It was de-escalated to green on 15th August and no further updates were received. NHS Boards normally close incidents for reporting once the HIIAT has been assessed as Green.

b) In July a child with Stentrophomonas was being monitored by PICU but was not transferred there. Do you know why the child wasn't transferred to PICU?

A. No.

c) Can you describe what specific action and/or advice followed on from receipt of the RED HIATT?

A. Lisa Ritchie was the Nurse Consultant assigned within HPS/ARHAI as HPS lead. No HPS support was sought from the NHS Board. She did not attend any meetings or provide external support. Lisa would have been lead for communications between NHSGGC and SGHAIPU. During the incident Lisa was on annual leave (I think for around 1 week) and I took on the role of communicating between SGHAIPU and NHSGGC.

d) To what extent was the action and/or advice effective?

A. At that time NHSGGC closed the incident once typing had been received which suggested that the two cases were not linked and therefore there did not appear be a transmission event within the hospital setting. During this period HPS were not aware of any reason to suspect there were any issues that had been identified relating to the design or management of systems within the building.

20. Are you aware of any other HAIs in 2017? If so, can you recall:

a) What was the nature of the infection?

A. From reviewing the master spreadsheet ARHAI Summary of Incidents Outbreaks **(A33660754 - Bundle 27, Volume 3, Document 25, page 477)** there was 33 infection related incidents reported to HPS by NHSGGC.

b) Was a link to the built environment suspected and if so, in what respect?

A. HPS/ARHAI have assessed these ARHAI Summary of Incidents Outbreaks **(A33660754 - Bundle 27, Volume 3, Document 25, page 477)** as 15 not considered to be linked to the environment and 17 with possible environmental links.

c) In what area of the hospital did the infection(s) occur?

A. Of the incidents that had possible links to the environment five were recorded in PICU; four were recorded in NICU; four were recorded in Paediatric Haematology Oncology; two were recorded in neuro surgical and one in both Ward 3A and Critical Care within RCH.

d) What sampling / testing was conducted and was a link confirmed?

A. Details regarding investigation are only complete for Red and Amber assessed incidents (n=4, one Amber three Red) all of which had water testing carried out as part of the incident management.

e) At what stage did HPS get involved?

A. I have been provided with insufficient time to research individual incidents to provide the detail.

f) What, if any, external reporting occurred?

A. All Red and Amber incidents are reported to SGHAIPU. I have been provided with insufficient time to research individual incidents to provide the detail.

g) Was there a PAGs or an IMT?

A. I have been provided with insufficient time to research individual incidents to provide the detail.

h) What control measures were put in place?

A. I have been provided with insufficient time to research individual incidents to provide the detail.

i) Whether prophylaxis was administered?

A. I have been provided with insufficient time to research individual incidents to provide the detail.

j) Were the actions taken sufficient to respond to the incident?

A. I have been provided with insufficient time to research individual incidents to provide the detail.

k) Can you comment on the effectiveness or otherwise of the IMT?

A. I have been provided with insufficient time to research individual incidents to provide the detail.

21. What can you tell the Inquiry about the practice of catch-up calls at QEUH?

A. I am not clear what is referred to in this question.

2018 - Infections in Ward 2A and 2B

22. There were a series of infections in Wards 2A and 2B between March and November 2018, known as the Water Incident:

a) Although you were not the NC supporting this incident, can you describe your involvement through HPS/ARHAI from the outset in March 2018, e.g. how did you become aware of the issue, what did you understand to be the issues, which meetings updated you, what action was taken, and/or advice given?

A. I was not directly involved. I would have been updated through internal meetings/updates and included in the SG email updates. I attended internal meetings to provide peer review and support to the NC supporting NHSGGC. My understanding was that the IMT managing the incidents had several hypotheses and that some of the investigations supported water contamination as a possible source for the unusual pathogens being isolated. I also chaired the IMT debrief meeting in May 2018.

b) You say that you provided support to the HPS/ARHAI NC, what form did your support take?

A. During the period I provided peer support to Annette Rankin and Lisa Ritchie who were supporting the NHS Board. I also chaired the debrief meeting.

23. Please see **(A43119799 – Email chain from Ann Lang to T. Inkster and Others - NHS GGC Water Incident Debrief Meeting – 15th May 2018 – 01 May 2018 to 21 May 2018 – Bundle 14, Volume 2, Document 95, page 209)**

a) What was your involvement in the debrief meeting?

A. I chaired the debrief meeting. I believe Dr T Inkster as the chair of the IMT asked if I could chair the meeting as, at that point I had not been directly involved in supporting the incident, therefore I would have no preconceived views of the management of the incident, and she was looking for an independent chair to facilitate discussion from the IMT members.

b) What lessons were learned from the incident?

A. Final report attached document. Item 5325 **(A49815996 – Full incident report June 18 – Bundle 27, Volume 5, Document 19, page 46)**

c) What actions/steps, if any, were taken as a result of the debrief?

A. I do not recall what actions the NHS Board took, and I have not been provided with sufficient time to research and provide any detail.

d) To what extent were the actions/steps effective?

A. New cases were reported shortly after the debrief report was issued and the incident was reopened. I do not recall what actions were taken and I have not been provided with sufficient time to research the detail.

24. Was there any discussion in NHSS regarding NHS Assure inspecting or validating the rebuilt Schiehallion Unit (Wards 2A and 2B), following the NSS HFS Report in respect of QEUH/RHC? If so, please give details.

A. I was not directly involved in any discussions. NHS S Assure members, Mr Ian Storrar, Mrs Annette Rankin and Mrs Julie Critchley may be able to assist.

HAIs in 2018

25. Are you aware of any other HAIs in 2018? If so, please reply to questions a-k in question 10 above.

A. Please see previously submitted **ARHAI Summary of Incidents Outbreaks (A33660754 - Bundle 27, Volume 3, Document 25, page 477)** list of infection related incidents reported by NHSGGC. I have not been provided with sufficient time to research the detail.

Incidence of HAIs on Ward 6A – 2019

Please see: **A37992136 – 20.09.19- IMT Gram Negative Blood Ward 6A, Bundle 1, Document 81, page 370**
A36591643 – 08.10.19- IMT Gram Negative Bacteraemia – Paediatric Haem Onc, Bundle 1, Document 83, page 373
A36591709 – 05.11.19 - IMT Gram Negative Blood Ward 6A, Bundle 1, Document 86, page 392

26. Concerns about HAIs began to emerge on ward 6A following the inhabitation by Schiehallion patients. To what extent, if any, was HPS aware of the concerns?

A. Annette Rankin and Lisa Ritchie provided HPS/ARHAI support to the NHS Board. I assisted in reviewing the data sets to aid in the investigation and ongoing management of the incident.

27. You provided support to the NC supporting the board by reviewing data and attending two IMTs in their absence.

a) What was the intention behind the support you provided?

A. The CNO requested a review of all the data sets being used to inform the IMT.

b) What data did you review?

A Lab data supplied by Dr C Peters, data supplied by Dr I Kennedy and ECOSS data supplied by HPS.

c) By reference to Bundle 1 – IMT minutes – which meetings did you attend in the NCs absence?

A. 25th September 2019 – Scottish Government Healthcare associated infections linked to Ward 6A, Queen Elizabeth University Hospital: stock-take meeting with HPS, HFS, NHSGGC, also 5th November 2019 – NHSGGC IMT.

d) What was your contribution to the meetings?

A. The CNO explained that the purpose of the meeting was to provide a stocktake on the ongoing incident in Ward 6A at the Queen Elizabeth University Hospital (QEUH) and provide an opportunity to reflect, have an open discussion and to agree next steps. I attended on behalf of HPS/ARHAI in Annette Rankin and Lisa Ritchie absence and to discuss the data review report.

28. If HPS was aware of concerns, what action was taken and/or advice given?

A. I am not clear in what context? HPS members of the IMT escalate any concerns through the IMT, internally within HPS/ARHAI and where appropriate to SGHAIPU.

29. How effective was the action or advice?

A. In my opinion the action/advice to upgrade the unit was effective in reducing blood stream infections within this patient population.

30. If you were aware of HAIs on ward 6A at this time, for each infection on Ward 6A post decant can you respond to the questions a-k in question 10 above.

A. I did not support the incident. Annette Rankin or Lisa Ritchie would be better placed to respond to this question.

<u>Whistleblowers</u>

31. Throughout 2018 there were ongoing Whistleblowing procedures involving several Microbiologists. Were you aware of this at the time? What was your perception of it?

A. I was contacted by whistleblowers in August 2019, December 2019, 2020, and 2023 - all raising different concerns. I was also aware from the Scottish

Government Health and Sport Committee letter (May 2019) (**A49683669 – Bundle 27, Volume 3, Document 31, page 548)** that concerns had been raised with it by Consultant Microbiologists.

32. Did you forward Dr Christine Peters concerns to GGC and receive a response?

A. All whistleblowing concerns were reported to the NSS Executive whistleblowing lead, who in turn raised them with the NHSGGC lead. A response was provided by myself highlighting the NHS Scotland Whistleblowing Policy, with details of where they might receive support, including how and who they should escalate. NSS does not have a national whistleblowing remit. None of the whistleblowers gave NSS consent to share any of their details. The concerns were also raised with SGHAIPU. I am aware (although I was not included) that on at least one occasion SGHAIPU addressed these concerns directly with NHSGGC.

a) What was your perception of Dr Peters concerns, and the response to them?

A. All concerns raised by whistleblowers direct to HPS/ARHAI appeared genuine concerns, highlighting issues they felt were important for patient and or staff safety. Of the whistleblowing concerns relating to the environment, I received a letter in August 2019 relating to the water incident. The main points from the letter received were shared with SGHAIPU by myself (as per Question 6): **(A49815731 - 5307 - NHSGGC - anonymous whistleblower - Bundle 27, Volume 5, Document 7, page 24)**

- The chair is unable to do her job in protecting patients from infections due to the culture and organisational failings citing lack of support from management.

- Critical information has been denied to the chair, or false accounts given by high level managers.

- Microbiology/Clinical judgement regarding the fact that there is a real issue with unusual environmental pathogens in Haematology paediatric patients is being continuously questioned.

- Lack of transparency re communication.

b) What did you do with the response? Was it acted on by GGC? If not, do you know why not?

A. I escalated this through NSS Executive lead and SGHAIPU. I know that NSS Executive lead then communicated directly with NHSGGC Executive lead. I recall SGHAIPU also contacted NHSGGC directly in relation to issues raised by Whistleblowers on several occasions. I am not aware of NHSGGC action as a direct result of the Whistleblowers allegations.

Cryptococcus

Please see: **(A41398342 - Email Chain L Ritchie to L.Shepherd and others - HIIORT – NHS GGC - Wards 2A and 4C, QEUH -21 December 2018 – Bundle 14, Volume 2, page 321)**
(A36690564 – HIORTT QEUH crypto - Dec 18 – Bundle 27, Volume 4, Document 20, page 246)

33. Had you seen/ heard of Cryptococcus in a healthcare setting prior to QEUH?

A. During my ICN career I cannot recall have previously been aware of any cases reported.

34. What were the issues with Cryptococcus at QEUH? When did you first become aware of these issues? What happened in response to these issues?

A. Please see the NSS response NHSS Assure: Response to Questions regarding NSS involvement as requested by NHS GGC in respect of all or any Cryptococcus incidents at QEUH/RHC between 2018 and 2022. (attached). Item 5323

35. What, if any, external reporting occurred?

A. As Question 33.

36. What steps were taken in response/ precautions put in place?

A. As Question 33.

Please see **(A41398511 – Email chain from Dominic Mellor to others –RE: Queen Elizabeth University Hospital – 20 January 2019 to 21 January 2019 – Bundle 14, Volume 2, Document 109, page 328)**

37. What is your view of the content of the media release?

A. Which media statement? HPS responded to a media inquiry and reflected the media statement NHSGGC had provided which was brief and given the investigations were still ongoing I don't think much more detail could have been provided at that time.

38. Did you read John Hood's report? If so, when?

A. There were several communications between NHS S Assure and NHSGGC regarding Dr J Hood final report. Please see the NSS response Question 2: In respect of the Report from the Cryptococcus Incident Management Team Expert Advisory Sub-Group dated 5th April 2022 item 5324 (attached)

39. What is your opinion of it? To what extent do you agree/ disagree with its findings?

A As per Question 37.

40. What actions were taken following the John Hood report? Did you consider those actions to have been sufficient? If not, why not?

A. NHSGGC did not share any actions taken after Dr J Hood report was submitted to NHSGGC Clinical Governance Group.

41. What else could have been done? How could matters have been handled differently?

A. If this question is referring to the investigation and conclusions of the Short Life Working Group set up to investigate the several hypotheses generated by the IMT, please refer to Question 37 response.

42. Did you have concerns about how matters were dealt with? Did you share those concerns with anyone? If so, to whom and when were your concerns shared? What action, if any, was taken as a result?

A. There were several communications between NHS S Assure and NHSGGC regarding Dr J Hood final report. Please see the NSS response Question 2: In respect of the Report from the Cryptococcus Incident Management Team Expert Advisory Sub-Group dated 5th April 2022: previously submitted 24th April 2024 (attached)

43. The Inquiry has become aware of at least two other cryptococcus cases from QEUH. Are you aware of this? If so, please describe your involvement.

A. As per Question 38 document, “Within the report NHSGGC included data on cases that NSS had no knowledge of and actions that NHSGGC had taken out with the Sub-Group”.

Short-term Decant from Ward 6A

44. Did you have any involvement in the decision to transfer patients out of Ward 6A? If so:

a) Can you describe the events leading up to surrounding the decision to transfer patients out of 6A?

A. I am not clear what dates are being referred to I note from reviewing the IMT bundle the decision to move out of Ward 6A was decided through the Cryptococcus IMT. HIIORT update provided by NHSGGC to ARHAI on the 23 January states ward 6A decant of all patients to Clinical Decisions Unit (CDU) for a 4 week period to allow completion of remedial estates work and further air sampling. ARHAI were not requested to support the Cryptococcus IMT and

therefore did not attend any meetings where the detail around this decision was discussed.

b) Can you describe the involvement of (i) HPS and (ii) Scottish Government in this decision?

A HPS/ARHAI were not a member of the IMT and I am not aware that ARHAI members were involved in any of these discussions. ii) I have no knowledge of SG involvement.

c) Can you comment on:

- the options assessment.
- suitability of the other wards (4B, 1, RHC and CDU) for Schiehallion patients; and
- steps taken to prepare these wards to receive Schiehallion patients.

A. I was not involved in the discussions or assessment, therefore I am unable to comment. I am not aware that HPS/ARHAI were involved.

45. Are you aware of the remedial work to be done on Ward 6A? Was HPS involved? If so, please describe the nature and extent of their involvement.

A. I was not directly involved, therefore I am not aware of the details. I have been provided with insufficient time to research the documents to provide any detail.

46. Regarding the transfer of patients back to 6A. Can you describe events surrounding this decision? Were HPS/ SG involved? If so, please describe the nature and extent of their involvement.

A. I was not involved. HPS/ARHAI were not members of the IMT. Updates were made through the HIIORT reporting however I have been given insufficient time to review the documents and therefore unable to provide detail. Mrs Annette Rankin or Mrs Lisa Ritchie may be able to provide more detail.

47. What was your understanding of the Ward 6A incident, and Gram-Negative situation at this time?

a) What hypotheses were investigated?

A. There were several hypotheses – 1. gut translocation; 2. unfiltered contaminated water source; 3. chilled beams and 4. Drains

b) What was your opinion?

A. During the cluster of GNO infections from June 2019 to November 2019, I suspected that patients might have been exposed to an unfiltered water source. At the IMT meeting on November 5th, 2019, I brought up a verbal report made to me regarding a leak in the kitchen of Ward 6A. I suggested that this could be a potential source of ongoing contamination, especially since all known water sources had point-of-use filters fitted. While this hypothesis was considered, it was quickly dismissed by the Director of Facilities, who indicated that the issue was just a small puddle that had been promptly addressed.

However, I later learned that the leak in the kitchen had actually caused significant water damage that appeared to have gone unnoticed for some time. If I recall correctly, one of the Consultant Microbiologists showed me photos of the damage. I also believe that samples were taken from this source, though I do not remember whether the results were shared with me. I am not aware of any report relating to this was shared with HPS/ARHAI.

Additionally, air sampling and flow testing conducted by Dr. J Hood as part of the ongoing investigations into the Cryptococcus incident revealed that the air flow and pressures in Ward 6A was problematic. Each time the main ward doors opened, air from peripheral rooms, including the kitchen, was drawn into the corridor. Since Ward 6A was a temporary paediatric ward without a designated play area, children played in the corridor. In my opinion, it is possible that the unknown unfiltered water sources from the leak which caused the water damage in the kitchen, combined with the air flow issues, contributed to the exposure of children playing in the corridor. Notably, the number of infections decreased after the kitchen leak was discovered and fixed.

c) What further investigations were required?

A. I feel there should have been a more proactive approach to provide assurance that there were no possible exposure to unfiltered water, including hidden water damage, prior to moving patients into the ward. I feel a more aggressive approach to investigating the ward environment as the source may have been beneficial in supporting the IMT.

d) What recommendations did you make, in relation to the ward and further investigations?

A. After reviewing the data, I recommended that the IMT reconsider the two-tier admission policy they had implemented as part of their controls. Under this policy, patients already established in their treatment were admitted to the ward, while new patients were sent to other hospitals, sometimes hundreds of miles away. The rationale behind this approach was that the established patients had already been exposed to the environment. However, unlike other pathogens that can lead to short-term immunity after exposure, the GNO involved in this incident posed an equal risk to both established and new patients. Additionally, the data indicated there was no single exposure event that could reliably differentiate between patients who had been previously exposed and those who had not.

e) Were your recommendations carried out?

A. The ward reopened to all admissions under the oversight of Scottish Government.

f) What amendments were made to the draft HPS report?

A. Table of comments received and ARHAI response attached.

g) Was there consensus as to the risk occasioned by drains?

A. I was not involved in drain discussions.

h) Can you comment on the success or otherwise of any control measures implemented?

A. I was not involved in the implementation of the controls however my understanding is that there were several improvements and control made in parallel therefore it would be difficult to establish which controls were effective.

HAI Incidents Post Re-opening of Ward 6A - to End of 2019

Please see:
A38172457 – 17.12.19 – IMT minutes FINAL – Ward 1D PICU – Bundle 1, Document 91, page 420
A38172455 – 30.12.19 – IMT Minutes Gram Negative Ward 1D PICU – Bundle 1, Document 92, pages 423 and 426

48. Were HPS aware of HAI incidents at QEUH post reopening of ward 6A to the end of 2019? If so, can you recall:

a) What was the nature of the infection?

A. Attached line listing of all incidents reported to ARHAI from RCH from November 2019 onwards. Extract from eORT Response to Q48a Q52. **(A49683773 - Extract from ARHAI Scotland Electronic Report Template – Filtered for entries from NHSGGC Paediatrics 2019-2023 – Bundle 27, Document 29, Volume 3, page 537)**

b) Was a link to the built environment suspected and if so, in what respect?

A. I have been given insufficient time to review all the individual incidents to provide the detail requested.

c) In what area of the hospital did the infection(s) occur?

A. I have been given insufficient time to review all the individual incidents to provide the detail requested.

d) What sampling / testing was conducted and was a link confirmed?

A. I have been given insufficient time to review all the individual incidents to provide the detail requested.

e) At what stage did HPS get involved?

A. I have been given insufficient time to review all the individual incidents to provide the detail requested.

f) What, if any, external reporting occurred?

A. I have been given insufficient time to review all the individual incidents to provide the detail requested.

g) Was there a PAG or an IMT meeting?

A. I have been given insufficient time to review all the individual incidents to provide the detail requested.

h) What control measures were put in place?

A. I have been given insufficient time to review all the individual incidents to provide the detail requested.

b) Whether prophylaxis was administered?

A. I have been given insufficient time to review all the individual incidents to provide the detail requested.

j) Were the actions taken sufficient to respond to the incident?

A. I have been given insufficient time to review all the individual incidents to provide the detail requested.

k) Can you comment on the effectiveness or otherwise of the IMT?

A. I have been given insufficient time to review all the individual incidents to provide the detail requested.

49. What can you tell the Inquiry about the IMT in relation to Ward 1D PICU?

A. NHSGGC had reported three separate GNB incidents within PICU - two were HIIAT Green and one HIIAT Amber. The HIIAT AMBER was reported on 28th November 2019. Thereafter, there were a number of communications from Scottish Government which resulted in NHSGGC being requested to carry out a look back exercise and report all three incidents on a single incident report.

This incident resulted in The National Framework being invoked by CNO, which included HPS and HFS reviews and the development of an improvement plan. Dr Marion Bain (SG Medical Director) was asked by SG to oversee this as an interim Director of IPC for NHSGGC alongside, Professor Angela Wallace, Executive Nurse Director NHS Forth Valley.

Removal of Dr Inkster as Chair of IMT – 2019

50. Were you aware that Dr Emilia Crighton was appointed Chair of the GNB IMT? **(A41890723 - 23.08.19 – IMT Gram Negative BLOOD Ward 6A – Bundle 1, Document 78, page 348).** If so, were you surprised by this? What was your opinion of her appointment?

A. I was aware as Annette Rankin shared the news in a SGHAIPU update, to which Sandra Devine, IPC Director replied “Chair agreed to be replaced in order for her to have time to review incident, results and actions. Other ICDs on the site were asked to chair and declined. National guidance confirms that it is appropriate for a CPHM to chair an IMT”. Dr Inkster replied to the group stating “The chair did not agree to be replaced to review the incident, results, actions. The chair was asked to demit due to feedback from everyone at the last IMT that the meeting was difficult. This however was not corroborated at the IMT today by senior clinicians, HPS or the microbiologists who were present and that was not the reason and that she had been replaced”.

I was extremely surprised at this decision. In my experience it is quite unusual to replace a chair of a well-established IMT, and furthermore, this was an extremely complex IMT with months of background information. The replacement chair had not been a standing member of the IMT or attended any of the IMT meetings. Therefore, it must have been challenging for them to inform themselves of the investigations, communications and concerns that had previously been covered.

51. Dr Inkster resigned in August 2019. What do you understand to be her reasons for doing so?

A. My understanding is that Dr Inkster was finding it difficult to operate as a Lead ICD and that she felt professionally compromised. Dr Inkster shared that she felt information was being withheld from her in her role as either Lead ICD or chair of IMTs and that her requests for actions were being overruled by management. I and others in ARHAI noted that she was frustrated and increasing concerned about the ongoing situation prior to her resignation.

HAIs in 2020

52. Were you aware of any HAI issues in QEUH at this time? If so, please give details. What action, if any, was taken? To what extent was the action effective?

A. Please see **Extract from eORT Response to Q48a Q52. (A49683773 - Extract from ARHAI Scotland Electronic Report Template – Filtered for entries from NHSGGC Paediatrics 2019-2023 – Bundle 27, Volume 3, Document 29, page 537)**

Interactions with the Independent Review, Oversight Board, Case Note Review

53. Can you describe any involvement you had with:

a) The Independent Review

A. I was interviewed as part of the Independent Review.

b) The Oversight Board; and

A. I was an attendee as an observer of the Oversight Board.

c) The Case Note Review

A. I had no involvement with the Case Note Review.

54. Please provide details of your involvement with Oversight Board e.g. your role there, involvement in decision making, reporting, outcomes.

A. As an attendee observer I was expected to attend meetings based on the agenda items to provide support and advice to the Oversight Board. I was also asked to provide comments to any IPC/HAI related reports and presentations.

HAIs in 2021

55. Were you aware of any HAI issues in QEUH in 2021? If so, please give details. What action, if any, was taken? To what extent was the action effective?

A. Please see **Extract from eORT Response to Q48a Q52**. **(A49683773 - Extract from ARHAI Scotland Electronic Report Template – Filtered for entries from NHSGGC Paediatrics 2019-2023 – Bundle 27, Volume 3, Document 29, page 537)**

I have been given insufficient time to review all the individual incidents to provide the detail requested.

HAI Reporting – Overview of Procedure and Practice

56. Can you describe the procedure for monitoring and reporting HAIs within NHS GGC and escalation to HPS and the Scottish Government?

A. No – I would suggest that this question would be better directed to NHSGGC.

57. Can you describe the practical operation of the system within the QEUH, including:

a) Barriers to reporting HAIs?

b) Data collection for different types of infections – fungal, gram negative, gram positive, other; and

c) The use of data sets for infections?

A. No - I would suggest that this question would be better directed to NHSGGC.

58. The relationship between HPS and the SG HAI Policy Unit, especially what level of oversight there is in practice. What does the oversight look like- is it formal or informal, meetings, emails, or phone calls etc?

A. SGHAIPU attend the ARHAI Senior Management Team meeting every second meeting. SGHAIPU have observer status on the ARHAI priority programmes oversight and advisory groups alongside NHS Boards and other stakeholders. Communications are both formal through briefing papers, updates and escalation all of which would be carried out through emails. We also have informal communications via Microsoft Teams meetings and telephone conversations for catch up meetings.

The level of oversight around incident and outbreak reporting and detail required is, in my experience, dependant on the individual Cabinet Secretary and Chief Nursing Officer in post.

59. What is your opinion on the adequacy and effectiveness of the system?

A. I believe the collaboration between ARHAI and SGHAIPU has been highly productive in supporting the goal of reducing infection risks and antimicrobial resistance in healthcare settings. However, the effectiveness of reporting healthcare infection risks relies entirely on NHS Boards adhering to the guidance outlined in Chapter 3 of the NIPCM. I am aware that some NHS Boards have local governance structures that differ from the NIPCM, which means that the oversight SGHAIPU can provide is limited to what the NHS Boards choose to report.

60. How might it be improved?

A. To enhance SGHAIPU's oversight and ARHAI ability to provide assurance around infection related incident and outbreak monitoring and reporting, several strategies could be revisited:

a) Standardisation of Reporting:

Update Reporting Guidelines: Refine and standardise minimum reporting requirements across all NHS Boards. Update and align with Chapter 3 of the NIPCM. This would reduce variations in local governance structures and improve the consistency of data reported.

b) Training and Education:

Targeted Training Sessions: Provide tailored training for NHS Boards in collaboration with NHS Education for Scotland to ensure a clear understanding of reporting requirements and the importance of compliance. This could include workshops, webinars, and ongoing support.

c) Enhanced Communication and Collaboration:

Regular Meetings: Facilitate regular meetings between SGHAIPU, ARHAI, and NHS Boards to discuss reporting practices, address challenges, and share best practices. This would foster collaboration and alignment among all parties.

d) Feedback Mechanism:

Structured Feedback: Develop a structured feedback system where ARHAI can provide NHS Boards with insights on their reporting, highlighting areas for improvement and offering guidance on better compliance with NIPCM guidelines.

e) Real-Time Data Monitoring:

In Digital Tools: Invest in digital tools to enable NHS Boards to report more efficiently, allowing ARHAI to monitor data in real-time. This would help quickly identify discrepancies and provide a clearer understanding of infection risks across different regions and support National early warning reporting of emerging infection related issues across healthcare.

f) Audit and Review Processes:

Regular Audits: NHS Boards conduct regular audits of their compliance with NIPCM guidelines. These audits would assess the quality and completeness of reported data, identifying areas where additional support or intervention is needed.

g) Strengthening Accountability:

Clear Accountability Framework: Establish a framework that clearly defines the roles and responsibilities of SGHAIPU, ARHAI and NHS Boards in the reporting process.

h) Pilot Programs and Continuous Improvement:

Pilot Projects: Launch pilot projects within select NHS Boards to test new oversight methods, such as enhanced data collection processes or new reporting protocols. The results could inform broader implementation.

By focusing on these areas, SGHAIPU can enhance its oversight capabilities, ensuring more accurate and comprehensive reporting, which is crucial for effectively managing national infection risks and antimicrobial resistance in healthcare.

Many of these strategies are currently being exposed through the SG HAI Strategy, ARHAI Scotland and NES annual work plans.

Current Situation

61. What is the current situation, including a) changes introduced since the reviews by the Oversight Board, the Case Note Review, and the Independent Review and b) any ongoing problems?

A. ARHAI Scotland maintain a database which holds details of all the HIIORT reports submitted by NHS Scotland Health Boards. Historically, the database was in excel format and held HIIORT forms submitted by email. In 2020, ARHAI Scotland transitioned to an electronic reporting tool. NHS Boards were provided with full educational support to enable this transition.

This has enabled ARHAI Scotland to adopt more efficient data extraction, as well as providing data for a dashboard accessible to ARHAI Scotland and the NHS Boards. This dashboard has functionality to interrogate submitted data at national and board level.

ARHAI Scotland has commenced the development of Chapter 4 – Infection Control in the Built Environment within the NIPCM Chapter 4 NIPCM. Currently, chapter 4 exists as a repository for evidence reviews and tools relating to IPC in the built environment, including delivery of appropriate decontamination within health and care settings and risk mitigation for water-based pathogens. Content going forward will be developed via the ARHAI Scotland Infection Control in the Built Environment and Decontamination (ICBED) programme, informed by stakeholder engagement and requirements,

learning from NHS Scotland Assure Assurance Programme, and learning from outbreaks and incidents linked to the healthcare environment.

Communication between NHSGGC and ARHAI Scotland around reporting infection related incidents, is challenging. NHSGGC has developed its own governance structures around carrying out HIIAT assessment and criteria for reporting infection related incidents, which appear not to align with NIPCM reporting. Discussions are ongoing between NSS and NHSGGC to improve communications and understanding of roles and responsibilities.

62. In what way was/is communication between NHSGGC and ARHAI challenging?

A. NHSGGC is a large Board with a large IPCT resource. There are many within that NHS Board who have extensive knowledge and experience in the field of microbiology and infection prevention. Therefore, NHSGGC are less likely to feel they require the support of a national organisation than a small NHS Board with limited internal resource. On occasions ARHAI have received questioning on why we are requesting data, what our role is in incident management and information has either not been provided or ARHAI have required to email several times before a response is offered. NHSGGC has developed its own governance structure for assessing and reporting infection related incidents, which does not align with national reporting as per Chapter 3 NIPCM.

Some of these issues came to a head with the Senior and Consultant Nurses writing to myself to express concern regarding interactions with NHSGGC IPCT in March 2023. SGHAIPU had previously advised that the Director of IPC NHSGGC and I work together to resolve some to the issues related to the reporting of infection related incidents and working relationships between the two organisations. The Director of IPC NHSGGC and I have now had weekly catch-up meetings since February 2023.

In June 2023 members of the ARHAI team had again raised some difficulties relating to incident and outbreak reporting from NHSGGC which I escalated to

my direct line manager, Mrs Julie Critchley (Director of NHSSAssure) and my professional lead, Prof Jacqui Reilly (NSS Executive Nurse Director). Both Prof Reilly and Mrs Critchley contacted NHSGGC HAI Executive Lead, Mrs Angela Wallace, which has resulted in a series of email correspondence and meetings.

63. In what way were/ are roles and responsibilities not fully understood?

A. Some members of the NHSGGC IPCT have questioned the role of ARHAI in their management of incidents and outbreaks, suggested that NHS Boards should report direct to SGHAIPU and do not appear to understand that reporting by individual NHS Boards allows national oversight of emerging infection related issues in healthcare and intelligence gathering on epidemiology of healthcare associated infections.

64. In what way did/do NHSGGCs governance structures around reporting not align with NIPCM reporting?

A. NHSGGC have developed their own criteria for deciding when a HIIAT will be carried out, if a PAG/IMT is set up and when incidents require to be reported to ARHAI.

65. Does communication between NHSGGC and ARHAI remain challenging?

A. Sandra Devine, Director of IPCT, and I continue to meet weekly to enhance communication between the two organisations. There are currently no ongoing issues relating to incidents. I am aware that Mrs J Critchley continues communications with Prof A Wallace.

66. Can you comment on how the challenge might be overcome and communication improved?

A. My response to Question 59 describes some of the strategies that may help foster open and transparent communication.

Declaration

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

The witness was provided the following Scottish Hospital Inquiry Bundles / documents for reference when they completed their questionnaire statement (Appendix A).

Appendix A – Documents referred to by SHI in this Questionnaire:

a) A37706719 – 1_national-support-framework-2017 -Bundle 27, Volume 4, Document 15, page 161
b) A44247022 – QEUH_RHC 2018 May Final Report - Bundle 7, Document 1, page 3
c) A44247015 – QEUH_RHC 2018 Dec Water Contamination Summary of Incident and Findings - Bundle 27 – Document 2, page 32
d) A40732035 - HPS draft Report GGC Situational Assessment RHC Wards 2a 2b - 5 June 2019 - Bundle 7, Document 5, page 194
e) A37916622 –2017-08-01 (14.09 Laura Imrie to Outbreak Group) – FW HIIORT Ward 2A RHC– attached – 01 August 2017 – Bundle 14, Volume 1, page 686
f) A37917014 – HIIORT 01.08.17 ward 2A Strentrophomonas maltophilia Bundle 27, Volume 5, page 43
g) A37916213 – NHSGGC – Email L Imrie to J Ives et al – 15 November 2019 – Bundle 14, Volume 2, page 626
h) A37916502 – 2017 07 27 (1418 [redacted] GGC to LI HIATT RED – NHSGGC Ward 2A Royal Children's Hospital – Bundle 14, Volume 1, page 680

i) A43119799 – Email chain from Ann Lang to T. Inkster and Others - NHS GGC Water Incident Debrief Meeting – 15th May 2018 – 01 May 2018 to 21 May 2018 – Bundle 14, Volume 2, page 209
j) A37992136 – 20.09.19- IMT Gram Negative Blood Ward 6A, Bundle 1, page 370
k) A37992136 – 08.10.19- IMT Gram Negative Bacteraemia – Paediatric Haem Onc, Bundle 1, page 376
l) A36591709 – 05.11.19 - IMT Gram Negative Blood Ward 6A, Bundle 1, page 392
m) A41398342 - Email Chain L Ritchie to L.Shepherd and others - HIIORT – NHS GGC - Wards 2A and 4C, QEUH -21 December 2018 – Bundle 14, Volume 2, page 321
n) A36690564 – HIORTT QEUH crypto - Dec 18 – Bundle 27, Volume 4, Document 20, page 246
o) A41398511 – Email chain from Dominic Mellor to others –RE: Queen Elizabeth University Hospital – 20 January 2019 to 21 January 2019 – Bundle 14, Volume 2, page 328
p) A38172457 – 17.12.19 – IMT minutes FINAL – Ward 1D PICU – Bundle 1, page 420
q) A38172455 – 30.12.19 – IMT Minutes Gram Negative Ward 1D PICU – Bundle 1 page 423 and 426
r) A41890723 - 23.08.19 – IMT Gram Negative BLOOD Ward 6A – Bundle 1, page 348

Appendix B – Documents referred to by the witness in this Questionnaire:

a) A42378956 – National National Infection Prevention and Control Manual - NIPCM - NHS NSS - Version last updated 4 October 2021 (contains references to a relaunch on 11 July 2022 and the copy being generated on 2 February 2023) Bundle 27, Volume 4, page 165
b) A46157856 - Email from C. Peters to L. Imrie re Meeting re Ventilation – 16 August 2019 – Bundle 27, Volume 4, Document 17, page 209

c) A49815692 – 5304 - 2019-08-16 17.10 RE_ Confidential_Redacted – Bundle 27, Volume 5, Document 15, page 37
d) A49815710 - 5306 - 2019-08-16 19.00 Re_ Confidential_Redacted –Bundle 27, Volume 5, Document 16 page 38
e) A49815731 - 5307 - NHSGGC - anonymous whistleblower – Bundle 27, Volume 5, Document 7, page 24
f) A49816008 - 5314 - 2019-12-30 14.23 - Re FW Queen Elizabeth Hospital Glasgow - Infection concerns Redacted - Bundle 27, Volume 5, Document 17, page 40
g) A49816032 5315 - Fwd whistleblowing concern raised with NSS re the QEUH ID unit ventilation – Bundle 27, Volume 5, Document 14, page 34.
h) A49816071 5316 - FW whistleblowing concern raised with NSS re
i) the QEUH ID unit ventilation Bundle 27, Volume 5, Document 1, page 4.
j) A49816137 5317 - Fwd whistleblowing concern raised with NSS re the QEUH ID unit ventilation Bundle 27, Volume 5, Document 2, page 13.
k) 20200121 NHS GGC close letter 2.0 Bundle 27, Volume 5, Document 2.1, page 13
l) A49683792 – Revised Framework for National Surveillance of HAI in Scotland – Bundle 27, Volume 3, Document 28, page 534
m) A37746908 – SBAR dated April 2014 – Pseudomonas – Removal of Flow Straighteners from taps - Bundle 3, Document 1, page 5
n) A33660754 - ARHAI Summary of Incidents Outbreaks - Bundle 27, Volume 3, Document 25, page 477
o) A49815996 – Full incident report June 18 – Bundle 27, Volume 5, Document 19, page 46
p) A49683669 – Letter from Convener, Health and Sport Committee to Cabinet Secretary re Health Hazards in the Healthcare Environment Inquiry - 2 May 2019 - Bundle 27, Volume 3, Document 31, page 548
q) A49815731 - 5307 - NHSGGC - anonymous whistleblower - Bundle 27, Volume 5, Document 7, page 24
r) A49683773 - Extract from ARHAI Scotland Electronic Report Template – Filtered for entries from NHSGGC Paediatrics 2019-2023 – Bundle 27, Volume 3, page 537

s) A49683792 – Revised Framework for National Surveillance of HAI in Scotland – Bundle 27, Volume 3, Document 28, page 534

SCOTTISH HOSPITALS INQUIRY

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

Witness Statements – Week Commencing 2 September 2024 – Volume 3

A49847577