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.

Infection Control Team and the Role of Health Protection Scotland (HPS)

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.

<u>Cupriavidus in the Aseptic Sink</u>

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.

<u>Cryptococcus</u>

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”.

<u>Short-term Decant from Ward 6A</u>

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