Scottish Hospitals Inquiry
Witness Statement of
Sandra Devine

Witness Details

1. My name is Sandra Devine, formerly McNamee. I am the Director of Infection Prevention and Control for NHS Greater Glasgow and Clyde. This role also includes the responsibilities of the Infection Prevention and Control Manager. I have been in this post since 2022. I was the interim Infection Control Manager from 2019-2022.

Qualifications

2. I completed my nursing training and became a Registered General Nurse in 1987. This was followed by midwifery training, which I completed in 1991. I am no longer registered as a midwife. I completed a BSc in Health Studies in 1993 at Glasgow Caledonian University. I have a Diploma in Infection Control (1996) and a Masters in Public Health (2001) both from Glasgow University.

Professional Background

3. Infection Control is my area of special interest and expertise. I began to practice within this field in 1994 as an Infection Control Nurse (ICN) in Glasgow Royal Infirmary where I worked until 1999. I was appointed to the post of Senior Infection Control Nurse for Stobhill Hospital in 1999 and practiced there until 2002. In 2002 I was promoted to the post of Lead Nurse IPC for West Glasgow Hospitals. I continued in this post until 2005, when I was asked to become the Lead for North Glasgow Hospitals; a post that

included both West Glasgow and North Glasgow Hospitals. In 2006 I was appointed as the IPC Nurse Consultant for NHS GGC.

4. In 2009 there was a service review after which I became the Associate Nurse Director for Infection Prevention and Control. I continued in this post until March 2019, when I was asked and agreed to become Infection Control Manager on an interim basis (ICM) when Tom Walsh stepped away from the role. I have been asked why Tom Walsh stepped away from the role as ICM. To take on a new role/challenge.

5. I am currently the Director of Infection Prevention and Control for GGC and have been since 2022. The primary function of this role is as a clinical expert and leader in the specialist field of Infection Prevention & Control (IPC) and also acting as the Board's designated Infection Control Manager. I am responsible for the overall management of the nursing and surveillance team and the allocated Lead ICD sessions. The post of DIPC is required to direct the development and implementation of an effective Board wide Infection prevention & control service.

Role as Associate Nurse Director for Infection Prevention and Control – 2009-2019

6. The Associate Nurse Director was a new role and commenced in February 2009. This role was to lead the Greater Glasgow and Clyde IPC Nursing and Surveillance Team. The lead nurses for each geographical teams and the lead Nurse for the Surveillance Team reported directly to me.

7. The nursing teams are geographically located. The teams have changed over the years in response to service needs. As of 2024 the teams are as follows; North, Clyde, Partnerships, South Glasgow Adults, South Glasgow Paediatrics and the Surveillance Team. In 2008 the teams were located as follows; North Glasgow, Victoria Infirmary, Southern General Hospital, Yorkhill Hospital, Royal Alexandria Hospital, Inverclyde Royal Hospital and

Surveillance. I also had managerial responsibility for the Hand Hygiene Coordinator, Nurse Consultant and my personal assistant.

8. There was a dedicated surveillance team which consisted of a lead nurse, data managers, administrative staff, and surveillance nurses. The surveillance nurses collect data to fulfil our responsibility with regards to mandatory surveillance of surgical site infection. Data collected from this process is returned to the Antimicrobial Resistance and Healthcare Associated Infection Group (ARHAI). ARHAI was formally known as Health Protection Scotland (HPS). This team also collected data from the teams and from our electronic case management system (ICNET) and from this they produce multiple reports. These reports are issued throughout the organisation from point of care to the NHS Board. I review most of these reports before they are issued but the majority are also tabled at groups and committees for additional comment and review before making their way through the organisation.

9. This team generate reports for both acute and partnerships areas. Acute refers to wards in general hospitals, whereas partnership refers to non-acute wards, such as mental health wards.

Reporting Structure

10. My line manager was Tom Walsh but I had a professional link to the Board Nurse Director (BND). I would meet with the BND regularly and update her on the work of the team. If I had any professional questions or issues I would discuss these with her. Tom Walsh reported to the Board Medical Director, Dr Jennifer Armstrong.

11. I worked in a triumvirate with Tom as the ICM and the Lead Infection Control Doctor (ICD). The three of us formed the Senior Management Team (SMT). Tom Walsh was the service lead. This worked well but the management line with the Lead ICD was complex in that the Lead ICD is also a microbiologist,

so they have a dual role and consequently dual reporting lines. Microbiology is located in the Diagnostic Directorate which has a completely separate management structure.

12. The Associate Nurse Director role has not changed over the years but there has been a reorganisation of the teams from time to time as service needs have changed, e.g. when hospital sites have closed. The teams in the North and Clyde have been established for many years and have not had to change significantly, unlike the teams in the South.

13. When services were moved from the Southern General Hospital, Yorkhill Hospital, Western Infirmary and the Victoria Infirmary to the QUEH campus, initially the plan was to have a single large team for Queen Elizabeth University Hospital Campus. It became apparent that because the challenges of paediatric IPC were different to that of adult IPC that the best way forward was to split these teams into two.

14. I have been asked to expand on the additional demands in paediatrics. Paediatric IPC has its own unique challenges. Paediatric patients for their own development require schooling and the ability to develop socialisation skills, which in turn means that they require interaction with other children, siblings and specialist environments within the hospital. Quite often parents stay with their children so single rooms have multiple occupants, often with toys etc. Small children are not fully continent unlike the majority of adults and this brings its own challenges in terms of preventing infection. Some infections, particularly viral infections occur at certain times of the year, e.g. Respiratory Syncytial Virus in winter, so the service requirement is not as predictable. In addition, in July of 2017 the National Infection Prevention and Control Manual was updated to include four additional gram negative organisms which seemed to be more prevalent in this group of patients. No national guidance accompanied the update to the organism list. I have included below an extract from: Timeline of incidents from the Queen Elizabeth University Hospital and the Royal Hospital for Children 2015-2019,

commissioned by the Scottish Government (2020) to illustrate the challenges this posed.

"The need for national guidance - During the time period covered by the timeline there was no apparent guidance available around the management, control and investigation of GNB and water borne organisms. HPS is currently working on such guidance and produced an aide memoire on the "Prevention and management of healthcare water associated infection incidents/outbreaks". Another aide memoire for infections/outbreaks associated with ventilation was also produced. It is noted that both areas are to be covered in a new chapter of the Infection Control Manual but currently the aide memoires are the only guidance available on water and ventilation associated infections/outbreaks."

General Duties as Associate Nurse Director

15. As Associate Nurse Director I had some clinical supervision duties, however my role also included setting up local systems and processes to ensure that we were as far as possible compliant with all National Guidance and Policies related to IPC nursing. If there were any changes that came from ARHAI and it meant a change of policy was required and if it was about the practice of IPC, it would be up to me to make sure that a system was in place to support its implementation and that the correct governance was in place if these changes had a significant impact on clinical practice. Collaboration with the Lead Nurses and ICDs for IPC was extremely important in order to support success. I would also have to ensure there was a method of monitoring the implementation of the new practises.

16. I have been asked to describe how I ensured there was a method of monitoring new practices and to give an example:

    a) When the NIPC manual was updated in 2017, I asked the data team to add two additional organisms to the alert referral list, i.e. Acinetobacter

spp and Stenotrophomonas maltophilia (Serratia marcescens and Pseudomonas aeruginosa had already been added to this list previously). After this point these organisms would automatically be referred to the local teams for review if a case occurred in a high risk unit. I asked the Nurse Consultant IPC to do a briefing paper for the IPC governance committees and asked her to determine what additional data the teams would have to collect to allow for any additional analysis (called XPs on ICNET). After discussion with the LICD and in the absence of any National Guidance, escalation triggers were proposed (see below).

b) August 2017 SBAR to Acute Infection Control Committee Triggers proposed were:

Trigger = same organism with same antibiogram in:

i. 2 patients in sterile body site e.g. blood, CSF
ii. 3 patients colonised any body site
iii. 2 patients with a combination of 1 sterile body site and 1 colonisation

c) Escalation occurs when we suspect that there may have been an increase in a ward/area over a given period of time; this triggers an additional process and can be the prompt for an IMT or PAG to review cases together. For many organisms this is two cases in a two week period.

d) This was followed up by a Standard Operating Procedure which was developed by the NC with advice from the LICD and myself which was then submitted to the IPC governance committees for comment and approval in November 2018.

e) In the SOP developed in November 2018 it was agreed that the process would be: The IPCTs will monitor high risk areas for these

organisms. A single case will be managed with standard infection control precautions. Where a trigger is reached in a single ward, the IPCT will undertake a problem assessment to determine further action. Triggers were updated in 2018 in the SOP and were now:

i. Single HAI bacteraemia
ii. Two infections other than BSI in a 2-week period
iii. Three colonisations in a 2 week period
iv. General increase in environmental Gram negative organisms i.e. mixed organisms, on advice of ICD

f) If an IMT or PAG did take place and the decision was made that this was an incident, the ARHAI Healthcare Infection Incident Assessment Tool would be used to determine the severity of the incident. All incidents regardless of the assessment would be reported to ARHAI but those that scored red or amber would be included in the Healthcare Associated Infection Reporting Template, we also issue a weekly update report to inform board directors of any incidents that scored red or amber.

g) This is one example of the process from local referral to reporting.

17. I would often attend Incident Management Team meetings (IMT) meetings, especially if it was an outbreak with an organism that was unusual, if the teams felt that they required additional support, or if it was in a high risk area. My role was both management and supervising practice. I have been an ICN for almost 30 years and would share relevant experience during these meetings.

18. In my role as Nurse Consultant and also in the role of AND I would be involved with the drafting and review of IPC SOPs. The NC takes the lead in this area but I continued to draft the outbreak SOP during my time as AND. Almost all of the SOP are the products of the IPC Policy Sub-group and once drafted are circulated to all of the governance groups for comment and

approval. The SOPs were generally summaries of national policies with checklist, algorithms and aid memoirs, to ensure that front line clinical teams had the immediate information they required to ensure that patients with infection were cared for appropriately.

19. I have been asked to give examples of IPC related SOPs I had involvement in producing for NHS GGC. All of the policies go through a consultation process so I would have been involved with all but would have drafted the outbreak SOP, which was an summary of the guidance from Chapter 3 of the National Infection Prevention and Control Manual **(A42378956 - NIPCM - NHS NSS - Version last updated 4 October 2021 (contains references to a relaunch on 11 July 2022 and the copy being generated on 2 February 2023) – Bundle 27, Volume 4, page 165)** and the overarching Greater Glasgow and Clyde Outbreak and Incident Management Plan **(A42362014 - Greater Glasgow and Clyde Outbreak and Incident Management Plan – February 2020 – Bundle 27, Volume 9, page 103)**.

20. An instruction regarding SOPs came from the Oversight Board stating we should be referring to the NIPCM to prevent any misinterpretation in translation. We now mainly use checklists/aide-memoires and the full SOPs are gradually being phased out. A link to the National Manual is on the desktop of every PC in GGC.

Governance

21. There is currently an annual Infection Control Programme and Work Plan. The programme lists all the guidance and national policies that we have to implement and the work plan is how we plan to achieve this. The work plan is reviewed by the IPC Governance committees who monitor our progress around actions. Most does not change year on year but anything new is included. We also include local initiatives if possible. The Annual Infection Control Programme has been in place since 2008.

22. Any SOP updated would go to the Acute Infection Control Committee (AICC) and the Partnership Infection Control Support Group (PICSG) for review and comment. The AICC is chaired by the Deputy Medical Director and includes clinicians/colleagues from various area, e.g. the Chiefs of Nursing, Occupational Health, Estates and Facilities Management (EFM) representatives, a member of the antimicrobial management team and members of the IPCTs.

23. In Partnerships, we have representatives from mental health, community, EFM, Public Health and members of the IPCT. There is a Board Infection Control Committee (BICC) and the Chairs of the AICC and PICSG are members. BICC in addition to the chairs of AICC and PICSG also has members from EFM, Antimicrobial Management Team, Occupational Health, Health and Safety and Infectious Diseases etc.

Healthcare Associated Infection Reporting Template (HAIRT)

24. The Healthcare Associated Infection Reporting Template is a national reporting tool and is a Scottish Government (SG) template. Currently it goes as a full report to the AICC, PICSG, BICC, Board Clinical Governance Forum (BCGF) and the Clinical and Care Governance Committee (CCGC). A Summary of the Healthcare Associated Infection Reporting Template goes to the NHS GGC Board Meeting. It includes our performance against SG Healthcare Associated Infection Indicators (previously called HEAT targets), our performance in relation to mandatory surgical site infection surveillance (paused at the beginning of COVID and not recommenced to date) any incidents or outbreaks that scored either amber or red using the ARHAI Healthcare Infection Incident Assessment Tool, summary of Healthcare Improvement Scotland (HIS) inspections, and compliance rates for hand hygiene. EFM colleagues also contribute and supply information on their estates and facilities audits. This report is produced every two months.

25. In previous years we would report on an ad hoc basis to CCGC, they would invite us to report if they felt it was necessary or if Dr Armstrong wanted them to be aware of an emerging or developing issue. I believe we briefed them two or three times with regards to the water issues at the Queen Elizabeth University Hospital (QEUH). I have been asked when were CCGC briefed about the water issues. On 12/06/2018 CCGC were briefed by Dr Inkster. I have been asked whether I was involved in the briefing at all. Dr Inkster prepared the briefing paper and presented it to the committee. I was the AND at this time and did not attend this meeting.

Attendance at Committees

26. As the Associate Nurse Director I would attend, the AICC, BICC and the Board Clinical Governance Forum. I also attended the Acute Clinical Governance Forum. Currently the Lead Infection Control Doctor now attends the Acute Clinical Governance Forum to represent IPC. On occasion I was asked to join the CCGC however I now attend and present the Healthcare Associated Infection Reporting Template to CCGC each time they meet.

27. At the AICC there is a section when all the lead nurses get the opportunity to report any incidents and outbreaks in their sector. It is their decision what to report. The Healthcare Associated Infection Reporting Template includes a summary of any incidents which score red or amber using the Healthcare Infection Incident Assessment Tool. Any incidents which score amber or red would be included in the Healthcare Associated Infection Reporting Template. If there is an incident that has been assessed as Healthcare Infection Incident Assessment Tool as green but which has elements that would support shared learning, these are also normally discussed.

28. BICC would receive hot debriefs but the main focus would be the information in the Healthcare Associated Infection Reporting Template and anything that was discussed as an emerging issue. We also receive an update from the

Public Health Protection Unit; this would be information regarding issues in the wider community which could potentially have an impact on acute services and may require IPC input.

29. We also have to prepare a report each Wednesday which we issue to the Board Executive Directors and the Service Directors. This is a contemporaneous report and has information on the numbers of infections included in the Scottish Government healthcare associated infection targets, i.e. C, diff (CDI), S. aureus bacteraemia (SAB), E. coli bacteraemia (ECB). This report also includes a summary of current incidents or outbreaks (amber and red). We include a brief summary on deaths where C. diff appears on a patients' death certificate or where a case of C. diff was defined as a severe case by clinical staff.

Infection Control Policy

30. IPCT prepare a yearly programme. It includes the boards mandatory responsibilities with regards to IPC as defined by Scottish Government. These are usually communicated by Scottish Government Department Letters (DLs) to the NHS Boards. It would also refer to the Healthcare Improvement Scotland (HIS) Standards which we are required to have in place. I have been asked what does DL stand for. It's DL and is government letters, e.g. DL (2024) 01 – Extant guidance on IPC surveillance and vaccination for influenza and COVID 19.

31. From this programme we then create an Infection Control Work Plan which outlines how we will implement the programme. We also include local initiatives and improvement work. The work plan is submitted to the committees so that the committees can monitor progress against our actions. I have been asked which committees the infection control work plan goes to. It goes to AICC/BICC/PICSG

Infection Control Team response to an Outbreak

32. I have been asked to describe how the team respond to an outbreak. In summary, once an incident or outbreak had been identified, the ICD will convene a Problem Assessment Group (PAG) or an Incident Management Team (IMT) meeting. Cases are reviewed and actions already in place are discussed as are new actions/control measures if appropriate. Hypotheses are generated. Communication with patients, staff and external organisations (ARHAI) is considered. Communication is normally supported by a member of the Communications Team. Duty of Candour is also considered if this is thought to be appropriate. These meetings are multidisciplinary but are normally chaired by an ICD with ICNs present as part of the multidisciplinary team.

33. I have been asked whether there any plans, other than the Outbreak SOP, in place for an outbreak and where can they be found. We no longer have a specific Outbreak SOP (as per recommendations from Scottish Government Oversight Board) so we now implement the Greater Glasgow and Clyde Outbreak and Incident Management Plan **(A42362014 - Greater Glasgow and Clyde Outbreak and Incident Management Plan – February 2020 – Bundle 27, Volume 9, page 103)** (this plan was developed by and updated in conjunction with the Public Health (Health Protection) Liaison Working Group and approved by the Corporate Management Team) and Chapter 3 of the NIPCM **(A42378956 - NIPCM - NHS NSS - Version last updated 4 October 2021 (contains references to a relaunch on 11 July 2022 and the copy being generated on 2 February 2023) – Bundle 27, Volume 4, page 165)**. We have developed a framework to support implementation of the above called - Infection Prevention & Control Team (IPCT) Incident Management Process Framework.

34. I have been asked whether the process changed as a result of events at QEUH. As per the recommendation of the oversight board the local SOP was replaced with the framework with reference to the GGC Outbreak and Incident Management Plan and Chapter 3 of the NIPCM.

Engagement with the Infection Control Team

35. Currently the Senior Management Team meet every Thursday and I have a 1-1 with the LICD every Friday. The core SMT also have a buzz meeting on a Monday (small informal meeting to discuss any issues from weekend). The Thursday meeting has as members, Lead Nurses IPC, ICDs, business support and members of the IPC Surveillance Team. I consider that I have a very close working relationship with the whole team. When I was Associate Nurse Director, I would meet Tom Walsh and Dr Teresa Inkster (Teresa) once a week, or once every couple of weeks, to discuss any issues or any new initiatives, although this was relatively informal. As a team we would be in contact should the need arise. There was also a formal SMT which was minuted and this met monthly and included all ICDs and ICNs.

36. When I came into my role as Associate Nurse Director, Professor Craig Williams (Craig) was the Lead Infection Control Doctor before Dr Teresa Inkster took over that role. I had never worked with him before that but I had a good relationship with him. He was very respectful and listened to your opinion. He was very supportive of the whole team. Pamela Joannidis (Pamela) was the Nurse Consultant and had worked with Craig before. She had been the lead in one of the sectors and then ultimately became the acting Associate Nurse Director. Pamela had worked with Craig for some time and my impression was that she had a positive relationship with him. I had known Teresa for quite some time as she had been a Senior Registrar in West Glasgow Hospitals when I was the Lead IPCN. When Teresa took over from Craig I had no concerns about this.

Role as Acting Infection Control Manager 2019

37. In April 2019 I was asked to take on the role of interim Infection Control Manager. This role meant I had more of a direct link to the Lead Infection

Control Doctor in that I managed the IPC sessions the LICD undertook. It was not significantly different from my previous role, just a bit more formal in terms of managing the LICD sessions and I had more interaction with Jennifer Armstrong who was my line manager. I was previously responsible for the management of the nursing service so this was an expansion in terms of the LICD. The new role meant that I had to take a more active role in areas such as the risk register, finance, contingency planning etc. I did receive some financial training and some external training with regard to the ongoing development of the risk register. Tom Walsh did not have an IPC background but I did, so felt able to ask clinical questions at IMTs based on my experience and training.

38. I have been asked what is the risk register and what were my responsibilities in relation to it. A risk register is a system of recording service specific risks and identifying owners for these risks. They also describe mitigations in place to reduce any risks identified. I would have contributed to its contents in the past and now review this with team members before it is submitted for information to the IPC governance committees.

39. I have been asked when did I first have any involvement with this risk register. There have been Infection Control RRs in place since 2009. The process involves team members agreeing what might be a risk and what mitigations can/have be put in place to reduce these. I would have been part of this team who reviewed the risk register.

40. As ICM, my immediate Line Manager was Jennifer Armstrong. Teresa was Lead ICD and Pamela Joannidis was the Acting Associate Nurse Director. Pamela was responsible for leading and managing the work of the nursing teams.

41. The three of us were working in the triumvirate I described before. I directly managed Teresa's LICD sessions and Pamela. This caused some difficulties initially. I recall once when Teresa returned from being absent and I had sent a fairly generic email asking that if she was off in future could she please text

me to say she was off and also let me know when she returned. I received an email from Teresa, who had copied in Doctor Christine Peters her manager in microbiology, to say that I was not her manager, Dr Peters was. I was trying to ensure there were enough ICDs on duty to provide a safe service. There are also HR policies regarding absence and holidays that I would have to follow but it was a grey area and remains so to this day. In practice it does not really cause us any issues. The current Lead ICD Dr Linda Bagrade will let me know if anyone is off sick or on A/L and organise cover.

42. When I took over the role of ICM I still attended the AICC, BICC and the Acute Clinical Governance Forum (ACGF). I also attended the Board Clinical Governance Committee (BCGC) and became responsible for the drafting of the Healthcare Associated Infection Reporting Template.

43. My role as ICM involved having an overview of the information available to the organisation and the teams. There is a dedicated data team who manage, quality assure and prepare reports for the team and the organisation. If an incident or outbreak is identified the team on the site led by the ICD will manage the incident. I have been asked and confirm that it would be unusual for me to have to move staff to help with this process. If there was a major incident then we did have senior staff that could assist, e.g. Associate Nurse Director, Nurse Consultant Infection Prevention and Control (NCIPC).

Risk Management and Reporting

44. One of the main responsibilities in my role is reporting of key performance indicators, risks, incidents and outbreaks and compliance with mandatory programmes of activity, i.e. compliance with hand hygiene, surgical site infection surveillance. This information is then presented to the Board through our governance structures and reports. We have information that goes from point of care (wards) to the NHS Board. The data team prepare

reports and this will include trend data in the form of Statistical Process Control Charts (SPCs). Currently wards receive SPC for MRSA and C. difficile infection, this tells the wards if they have an increase in numbers. SPC will not tell them why it has increased only that it has. Information is layered, so the wards will get a report, but there will be a hospital report and a board report so the same data is used many times.

45. As ICM some reports would be sent to me for approval, e.g. SAB and ECB reports. Others would go via the leads to the sector SMTs directly, e.g. monthly update reports. The data team contribute to these reports, e.g. they would insert the sector SPCs. It is an established system of presenting data in a standard way and so there is not a lot of decision making around them. Sometimes my role is more about the narrative to go into it, i.e. if the numbers are high what have we done or what we are planning to do to address this or asking a question about the information presented. Site teams review cases in real time and will know if there is an issue. They do not rely on SPCs for this but they do use them to identify trends over time.

46. The data team analyse information which is then included in the reports to services. This information/data is obtained from information which is imported into ICNET from various clinical systems but primarily the microbiology laboratory. Sometimes actions required are local, sometimes it can be a board wide issue that requires a more formal structured system wide action, e.g. increasing number of SABs.

47. This could be something that would be included in our annual work plan or be taken forward by the Infection Prevention and Control Quality Improvement Network (IPCQIN)

48. Reduction in SAB is one of the government indicators. For example, if a patient has a blood sample taken and after analysis by the microbiology it is confirmed that the sample is positive for S. aureus then this result goes from microbiology to ICNET to the team where the patient is located and appears as a case (ICNET is a patient management system). There is a mandatory

requirement to collect data on this referral and this information is used to inform both the local SAB reports but it is also submitted to ARHAI to comply with our responsibilities in relation to national surveillance. I have been asked to describe a “ping” by reference to the technology. Ping was a poor word to describe the generation of a case in ICNET.

49. Statistical Process Control chart (SPC) are designed to give a background rate and should tell us (special cause variation) when something may have changed but not what. Managing variation is essential to quality improvement. Quality improvement is primarily concerned with two types of variation – common-cause variation and special-cause variation. Common-cause variation is random variation present in stable healthcare processes. Special-cause variation is an unpredictable deviation resulting from a cause that is not an intrinsic part of a process. By careful and systematic measurement, it is easier to detect changes that are not random variation. I discuss SPCs in more detail below.

50. SPC may show that there has been an increase in a specific area; if it is a specific area this can lead to actions in that area that may not be required across the board, e.g. north sector may be higher than expected but the other sectors are fine or there can be an increase across the whole organisation. Each sector has a representative who attends the IPC Quality Improvement Network and data and local actions are reported on in this forum. Sector representative may also report increases and actions or issues at AICC where a sector report is presented. If there is anything exceptional it is expected that this is highlighted in this report. Board wide data goes into the Healthcare Associated Infection Reporting Template, so that the Board can observe the board performance against the SG indicators.

51. I have been asked, when I use SPC charts to understand infection rates by what criteria do I select the particular infections to include in the charts. SPC have traditionally been developed to view performance against SG infection indicators, e.g. SAB, ECB, CDI, SSIs but we do use them for other things, for example, there has historically been a background rate of Vancomycin-

Resistant Enterococcus in renal patients, so we use these in this context to monitor trends over time in an area where there is a background rate.

52. If board actions are required to address something then it is my role to put that into a narrative which would be included in the Healthcare Associated Infection Reporting Template and presented to the relevant governance committees. This process is replicated throughout the board, so for example, if I were the Director of the South Sector I might also report actions taken to address an issue to ACGF. All of the service directors are members of ACGF so will be able to view other sector reports and be able to share and compare information. ACGF stands for Acute Clinical Governance Forum.

53. The yearly programme and work plan is based on what GGC has to implement or have in place in order to meet its obligations with regards to government policy and guidance. The content of both is reviewed by the IPC Governance committees and actions are agreed and monitored at each meeting. Often other elements which are not mandated are included and these are usually local initiatives or actions taken at the request of clinical services, for example, we initiated surgical site surveillance for spinal patients in the institute of neurological sciences (INS) and surveillance of endophthalmitis post cataract surgery. These were both non mandatory local surveillance programmes based on local clinical needs/requests.

Infection Control Work Plan

54. There is oversight on the progress with the actions within the work plan, in that, it is updated and presented each time the IPC governance groups meet. I had the responsibility for drafting most of these plans but before they are presented to the committee they go out to the IPCT for their comments and additions. Scottish Government policy/indicators are normally in place for several years, however, they are normally updated over time to support improvement over time. The SAB targets/indicators have been in place for approximately 15-20 years but have evolved over time and have been

updated with the requirement to reduce SABs by more each time. If this happens a Directors Letter (DL) is issued by Scottish Government and these are referenced to in the programme and if necessary the work plan is updated. There are some things that are core, like education but most years there will be new guidance or initiatives that we will be required to put in place.

55. There is oversight of the plan at the IPC Governance Groups. The Healthcare Associated Infection Reporting Template goes to all members of the AICC and PICSG for comments and to BICC membership for approval but its final destination is the Clinical and Care Governance Committee (CCGC) where it is submitted for assurance.

56. Other teams may contribute to the work plan and programme, for example, the Antimicrobial Management Team (AMT). This demonstrates shared working and collaboration.

57. The work plan is intended to be a collaborative document were colleagues are encourage to influence and add to it. This document is continually updated not only with updates on intended actions but also if new work streams are identified in real time.

Staph aureus bacteraemia (SAB) reports

58. I review some of the reports but have no role in reviewing the data that informs them; that is the role of the surveillance team but is non- contentious in that a positive blood culture is a positive blood culture. There are no grey areas. What I contribute to is the narrative, for example if there is a higher than expected number of SABs in a sector, I will make reference to this and any work that I know is ongoing to address this increase. This data is also used in the report that goes to the Acute Clinical Governance Forum (ACGF) which is currently attended by Dr Linda Bagrade. There may be additional

discussions at this group regarding actions to address or where improvement has been noted.

Statistical Process Charts

59. As discussed above, Statistical Process Control chart (SPC) are designed to give a background rate and should tell us (special cause variation) when something may have changed but not what. Managing variation is essential to quality improvement. Quality improvement is primarily concerned with two types of variation – common-cause variation and special-cause variation. Common-cause variation is random variation present in stable healthcare processes. Special-cause variation is an unpredictable deviation resulting from a cause that is not an intrinsic part of a process. For example, if a higher number of patients have infections than expected, that should be the trigger for an additional review. The background rate is traditionally monthly (it is recommended that some unit of time is used). 25 data points is the recommendation made in the literature and should be the minimum number used to calculate the average and set the upper and lower control limits.

60. Three standard deviations above the mean would mean that something unusual has happened. It is called, “unnatural variation”. For most charts an upper warning limit (2 standard deviations from the mean) is included. This ensures that we are aware of any increase, however anything up to three SD can be natural variation. I have been asked whether there a reason we use months. SPC have been used for almost 30 years in GGC and have in the main always been monthly charts so that we can see rates over long periods of time.

Reporting

61. As the ICM, the Medical Director would sometimes ask me for information so that she could provide a briefing to senior officers within the board. For

example, in the beginning of 2019 when everything was busy, Jane Grant asked for a timeline of events. Most of the information would come from the documents from the IMT, HPS summaries or email updates from the team. What I would normally do as Associate Nurse Director, would be to draft and send to other members of the team to ensure that my interpretation of the information was correct. Jane Grant is the Board Chief Executive.

62. My role would have been to ensure that the collated information was as accurate as possible. On occasion I have been invited to these meetings to answer questions or give explanations of actions taken. I can recall a couple of occasions in 2019 where I was asked to accompany Teresa and Jennifer to CCGC. I might explain contents if asked, for example, I could be asked what kinds of policies we would audit during an outbreak or if we had identified an issue what we had done to rectify it.

63. I have been asked what were the specific reports CCG asked for. After reviewing available information, I can confirm that both the infection incidents and an update to the action plan produced to address the concerns of the microbiologist in 2017 were discussed at the CCGC meeting on the 5 March 2019 **(A32454753 - Minutes of NHS GGC Clinical Care and Governance meeting dated 5 March 2019 - Bundle 27, Volume 4, page 96)**. I attended this meeting with Dr Inkster. Paper presented by TI– Recent Infection Incidents Update and I believe the previously referenced action plan from 2017 had also been updated and tabled **(A42378956 - NIPCM - NHS NSS - Version last updated 4 October 2021 (contains references to a relaunch on 11 July 2022 and the copy being generated on 2 February 2023) – Bundle 27, Volume 4, page 165)**.

64. There are a number of reports issued to the SMT daily and weekly, for example each day I am updated on the number of patients so far this this month that have tested positive for SABs, C. diff and ECB from the data team. At the moment I receive a daily update on the number of patients with COVID. A weekly report is issued each Wednesday to Directors within the board. In the past I would have prepared this report but it is now done by the

ANDIPC. I believe systems are in place to identify what is occurring on a daily basis and that any significant issues are escalated. This is from a combination of available data and local intelligence.

65. I have been asked regarding the decision to consider external expert opinion. This would normally be an expert from ARHAI (formally HPS) or as required in the case of the incidence of bloodstream infections in 2a in 2018, it was an UK expert in water management, e.g. Dr Susanne Lee. I have been asked whether I can think of an example of this happening**.** Experts from HPS/HFS and UK experts were all involved in the increase in blood stream infections incident in early 2018.

66. ARHAI are considered to be the National experts. There is always the option to ask for their assistance if you are reporting and incident or outbreak. IPCT in GGC had informal links to Peter Hoffman in Public Health England. Dr John Hood had a keen interest in ventilation and I understand he had close links with him. Peter Hoffman is a lecturer on the Healthcare Infection Society (HIS) course on Engineering Aspects of IPC so many of the ICDs and microbiologists I imagine would have met him. I would have networks of colleagues in both Scotland and the UK who I could approach if I required some advice. Dr John Hood was consultant microbiologist in the North Sector he was also previously an ICD. Peter Hoffman was a Consultant Clinical Scientist with Public Health England.

67. I understand there were several meeting with experts that I was not part of. I do know that they involved representatives from GGC although I cannot definitively say who.

68. Part of my Infection Control Manager role was ensuring the correct information was escalated through the governance structures. In the main these are collected from a set process, e.g. all amber and red HIIATs are reported in the Healthcare Associated Infection Reporting Template, in the Weekly Report, in the sector updates to AICC and PICSG. Numbers of infections that inform our performance with SG indicators, wards closed due

to norovirus or more latterly influenza etc. are included. However if there was anything unusual which there was the possibility for shared learning, these could be discussed in the governance groups. Information on how the board is performing in terms of the SG HAI Indicators is included in the Healthcare Associated Infection Reporting Template but could be specifically discussed in these groups. Hot debriefs go to the relevant governance committees and all to BICC. The process of reporting is multidisciplinary and everyone is strongly encouraged to contribute to the process. I would also either send updates or be copied into report and updates to ARHAI (HPS). All incidents during this period regardless of the HIIAT assessment were reported to ARHAI. Green HIIAT were reported weekly but Amber and Reds were reported in as soon as possible. There are some instances when a single infection with an infection of high consequence, e.g. viral haemorrhagic fever or an extensively resistant TB would be reported. ARHAI are responsible for onward reporting to the Scottish Government. This is the process that has been in place for many years.

69. Each sector IPCT include an ICD. We have formal and informal communications, e.g. we have weekly team meetings and 1-1 but I can be contacted at any time by phone, teams or email. Sector ICDs and LICNs are all members of the AICC. If an IMT is convened (at the request of any of the ICDs) I would either be at the meeting, or I would be given an update by the ANDIPC or the LIPCN. The IMT assess the incident collectively using the HIIAT. All incidents are reported to ARHAI and those that score amber or red are included as a summary in the Healthcare Associated Infection Reporting Template. Incidents are also communicated to the organisation through the weekly reports, AICC, monthly sector reports, and through the IMT process to clinical and local management teams. The ICD/ICM can also brief senior members of the board immediately should they think it necessary but incidents are also escalated through board structures from local teams to senior officers in the board if they think it necessarily.

70. There are processes to support communication and ensure visibility of actions and deliberations e.g. IMT process. However there is team

communications should something raise a concern, e.g. if there was a type of bacteria identified that the ICDs thought was unusual or emerging then that would also be discussed locally and if a more formal process was indicated then this would initiated (IMT/PAG). In this context the experience and clinical opinion of the ICDs is paramount, and example would be a bacteria with an unusual resistance pattern which may require action or kept under review.

71. GGC is a large health board so we are more reliant on adhering to system and processes to ensure that the same standards are in place across the board. We have a large team as a result. I understand that we are one of the largest teams in the UK. It can help when trying to compare rates across boards when ARHAI are benchmarking our performance in their quarterly reports. In order to try and support benchmarking ARHAI produce funnel plots and quarterly data is presented in this format. We have larger numbers so we have more assurance that they are likely to be a true reflection of our rates.

72. There is a disadvantage to being a large board in that if you, for example, do a board wide SPC for all new MRSA cases a smaller hospital could have much higher numbers if aggregated but it would be 'masked' in the overall numbers. In order to avoid this, the same data is used from point of care to board so that we can identify this type of situation. The same data is used cumulatively. Example ward a, b, c all have one case and ward d has 5. This will be displayed individually, so we would know to review what might be going on in ward d. These are then added together to produce data for a hospital, so 8 cases which may/or may not be above the UCL in the hospital SPC. When this is aggregated to say a sector (Clyde has three hospitals) this difference may disappear if all the others have low numbers. That's why it is important to look at this data throughout the system in a larger organisation.

73. As Infection Control Manager and a member of many IMTs I am involved in decisions to close wards because of incidents or outbreaks. The purpose of

the IMT is to decide collectively whether to close the ward or not or if in the case of a regional service, e.g. in-patient dialysis unit, then the IMT will try to balance the risk of exposure against the risk to the individual who requires treatment. Mitigations will always be part of this process, e.g. closing part of the ward and not the whole ward.

74. There is always a certain amount of paperwork associated with the IMT process. Minutes and action plans and in the past ARHAI would ask us to complete a Healthcare Infection Incident Outbreak Reporting Tool (HIIORT) and that was a useful summary. This changed to an online reporting tool also called the Healthcare Infection Incident Online Reporting Tool (HIIORT) which was not as easily used as a local summary so now the teams completed an incident summary which we can all use if a briefing on a particular incident is requested. ARHAI also do a helpful summary that they copy us into when they report any incidents to the Scottish Government.

75. If the incident is in a high risk area or in any way of an unusual nature of if the clinical teams have a particular concern the Director of the Service, Deputy Medical and Nurse Directors may be given a brief summary and I will alert the Executive Lead for IPC. This would be almost immediately but this would also be included in the weekly report.

Standard Operating Procedures (SOPs)

76. I contributed significantly to the development of SOPs when I was the Nurse Consultant for IPC (NCIPC). It is part of the role of the NCIPC, with the assistance of the IPCT SOP sub group to review the literature and draft SOPs for consultation. Once they are drafted, they would go through the governance groups so that everybody can review and comment on them. All draft SOPs go to AICC and PICSG for comment/consultation before going to the Board Infection Control Committee (BICC) for further comment if required and ratification. Occasionally these SOPs are drafted by particular

experts, e.g. ICD was the principle author of the Environmental Pathogens SOP although it was drafted with the assistance of the NCIPC.

77. I have input at committee stage, both AICC and BICC. The papers are issued approximately a week before the committee meetings. Within the papers there will be two or three SOPs. There are not usually many more than that. People see them beforehand, so we hope that they have read the papers before they come and that they are ready with their comments, or they send their comments to the Nurse Consultant beforehand.

78. If the SOPs have received significant comments from the members of the committee they can be rejected and sent back to the SOP subgroup for amendment or redrafting before going through the process again. The Public Health Protection Unit and the Infectious Disease Clinicians often have helpful comments or additions so it's not unusual that SOPs require to be amended or even redrafted.

79. The end point for approval of IPC SOPs would be BICC. They are standard operating procedures based on the National Manual; they are essentially a summary of the key parts of the guidance pulled together into one document to support use by frontline teams. Several years ago policies had to be written by individual boards, this was before there was a NIPCM **(A42378956 - NIPCM - NHS NSS - Version last updated 4 October 2021 (contains references to a relaunch on 11 July 2022 and the copy being generated on 2 February 2023) – Bundle 27, Volume 4, page 165)**.

80. SOPs are used widely in healthcare. The National Manual applies to everybody but we might have local SOP if no guidance is available. The manual had individual sections for different topics, local SOP collects these together into a single document.

81. The recommendation from the Oversight Board is to phase out all local guidance if possible and refer to the manual. We had been gently migrating towards this for a number of years, and certainly that was one of my

personal objectives. In response to the recommendation we put a link to the national manual onto the front page of the local IPC internet site so staff can directly access the NIPCM easily and the SOPs are now mainly checklists and algorithms.

82. NIPCM Chapter 3 has guidance on managing incidents and outbreaks. The Healthcare Infection Incident Assessment Tool has been in existence since 2009. The NIPCM was launched in 2012 with Chapter 1 with the others following at later dates. I believe Chapter 3 was launched in March 2017. Initially we were required to report only red and amber HIIAT to ARHAI. In 2016 green HIIATs were added to this requirement. We sent an excel spreadsheet of green assessments to ARHAI weekly.

83. I drafted the IPC Outbreak Plan as the nurse consultant and continued to do so as the Associate Nurse Director. When I first came into post as the ANDIPC Annette Rankin was the Nurse Consultant but her role was linked to the new build.

84. NHSGGC Outbreak Policy (IPC) was in place for many years, at least from as early as 2006. The report on the outbreak of C. diff at the Vale of Leven Hospital made a recommendation that this should be reviewed yearly. There is an overarching Public Health Outbreak and Incident Management Plan which is approved by the Corporate Management Team. The IPC Outbreak Policy/SOP was a summary of this with a focus on its application in acute care. The overarching document considers other incidents e.g. chemical, as well as infectious agents and its impact on the population as a whole not just those in hospital.

85. I have been asked whether I was asked to draft the outbreak SOP and whether I undertook this task. I would have been asked to do this from 2006 when I became the Nurse Consultant IPC. This would have been requested by my line manager Dr Syed Ahmed who was The Lead Public Health Consultant.

86. I have been asked whether there have been occasions when I have reported (or been aware of formal reporting) of systematic or regular reporting of the rates of infections from non-mandatory reportable organisms to AICC or BICC, and if so when. Please note this list is not exhaustive, I have tried to demonstrate occasions across sectors and over time where non mandatory organism incidents or outbreaks have been reported. HIIATs that were green would not normally have been escalated to BICC but would have been reported to AICC. All incidents are reported to ARHAI regardless of assessment since 2016.

a) 2015 NICU Maternity, QEUH, Serratia marcescens. Reported to AICC January 2016 and BICC 25/01/2016.
b) 2017, QEUH, exophiala (was amber then advised to downgrade by ARHAI to green). Reported to AICC 6/11/2017 and BICC 27/11/2017.
c) 2017, RHC, elizabethkingia miricola, green H II A T, reported to AICC 8/05/17.
d) 2017, RHC, Astro/rota virus. Reported to AICC 03/07/2017 and BICC 15/05/2017.
e) 2017, QEUH campus, INS, Enterobacter, HI I A T green, reported to AICC 04/09/2017.
f) 2017, Inverclyde Royal Infirmary, Increase in endophthalmitis, reported to AICC 8/5/2017 and BICC 15/05/2017.
g) 2018, NICU Maternity, QEUH, S. epidermidis, H I I A T Green, reported to AICC 18/10/18.
h) 2019 QEUH mucormycosis, reported to AICC 12/03/19 and BICC 25/03/19.
i) 2019 QUEH Cryptococcus neoformans, reported to AICC 25/03/2019 and BICC 25/03/2019
j) 2019, NICU Glasgow Royal Infirmary, S. aureus spa type t11164. Reported to AICC 2/3/19 and BICC 25/03/2019
k) 2019, NICU, Malassezia, green HII A T, reported to AICC 2/9/2019
l) 2020 QEUH, Burkholderia stabilis, reported to AICC 08/12/2020 and BICC 15/12/2020.

m) 2022, Royal Alexandria Hospital and Inverclyde Royal Hospital, exophiala, reported to AICC 06/12/2022 and BICC 15/12/2022.

87. We have also undertaken surgical site infection surveillance in the following non-mandatory categories. SSI surveillance rates are included in the Healthcare Associated Infection Reporting Template.

a) Knee arthroplasty
b) Repair of neck of femur
c) Cranial surgery
d) Spinal surgery (Institute of Neurological Sciences (INS) only)

88. SSI surveillance rates are included in the Healthcare Associated Infection Reporting Template.

National Infection Prevention and Control Manual (NIPCM) within ICM Role

89. The National Manual at the time did not give clear guidance on how an IMT should be conducted, although the Greater Glasgow and Clyde Outbreak and Incident Management Plan did. The SOP was a combination of what was contained within the NIPCM and the GGC Plan **(A42378956 - NIPCM - NHS NSS - Version last updated 4 October 2021 (contains references to a relaunch on 11 July 2022 and the copy being generated on 2 February 2023) – Bundle 27, Volume 4, page 165)**. The SOP was reviewed yearly. We no longer do this and have recently devised a framework for assisting teams in the management of incidents and outbreaks, which references the Greater Glasgow and Clyde Outbreak and Incident Management Plan and Chapter 3 of the NIPCM. It defines what is a Problem Assessment Group (PAG) is and what is an IMT. It askes members of the IMT to consider that if there are risks that cannot be addressed in the IMT process that these should be considered for inclusion in the IPC or services risk registers. The framework has links to the GGC HAI Communications strategy. The

framework links to existing guidance to support the process and is in keeping with the recommendations of the SG Oversight Board in that we should limit local SOPs, i.e. with the support of ARHAI Scotland, NHS GGC should review its local translation of national guidance (especially the National Infection Prevention and Control Manual) and its set of Standard Operating Procedures to avoid any confusion about the clarity and primacy of national standards.

90. I have been asked what the two things are that are used in the process. The Greater Glasgow and Clyde Outbreak and Incident Management Plan **(A42362014 - Greater Glasgow and Clyde Outbreak and Incident Management Plan – February 2020 – Bundle 27, Volume 9, page 103)** and Chapter 3 of the NIPCM. I have been asked where risks are recorded. Normally on the risk register of the service. I have been asked to expand on what the risk register is, what is recorded in it and by whom. The Risk register is normally owned by a service who identify risks and score them using a standard matrix. Those that score high are escalated through the organisation and may eventually end up on the Corporate Risk Register. The risk register for each service asks you to detail the mitigations put in place to reduce the risk.

91. I have been asked what guidance exists (in the SOP, Public Health Guidance or elsewhere) as to how to resolve disagreements between professional colleagues within IMTs. The GGC plan has this section below:

92. “Should any member of the IMT be unhappy with the way the team is functioning, they are encouraged to raise this with the group or with the IMT chair in private. If their concerns cannot be resolved satisfactorily they are free to raise them with their senior manager who in turn can raise it with the chief executive of their agency. That chief executive has the option of raising it with the chief executive of the NHS Board leading the investigation who will ultimately bring it to the attention of the chair via their DPH, involving the relevant counterparts of any other agency involved in the dispute. The lead

officer for the NHS Board is responsible for resolving these issues, preferably within the framework of the multi-agency IMT."

93. I completed the framework in the beginning of 2020 which was in response to the SG Oversight Board recommendation regarding local SOPs. At the moment Chapter 4 Infection Control in the Built Environment and Decontamination is in development (2024). There was some guidance available in the interim.

94. The IPC Incident Management Process Framework was considered by all of the IPC Governance Groups and was approved by the BICC. The AICC is chaired by the Deputy Medical Director of Acute and BICC is currently chaired by the Board Executive Nurse Director.

Role as Director of Infection Prevention and Control 2022 to date

95. In my role as Director of Infection Prevention and Control, my line manager is Professor Angela Wallace (Executive Nurse Director). My role is to provide Strategic leadership in the areas of IPC to NHS Greater Glasgow and Clyde which is the largest Board in Scotland and one of the largest in the UK, providing services for 1.2 million people across 35 hospital sites containing 6000 hospital inpatient beds. This includes five maternity hospitals/units, five Emergency Departments, seven Critical Care Units (including neonatal and paediatric critical care) three minor injury units, Glasgow Dental Hospital, 6 Health and Social Care Partnerships, prisons, directly managed dental services and care and residential homes.

96. I am the NHS GGC designated Infection Control Manager, I have the authority and responsibility to ensure strategies are developed and implemented to prevent avoidable healthcare associated infection. I am responsible for the development and implementation of an effective Board wide Infection prevention & control service. I also manage the IPC service and its functions. Professor Wallace was commissioned by the SG to have

oversight of the service during escalation and was the Operational DIPC at this time, Professor Marian Bain was the Executive Lead for IPC.

97. I'm focused on supporting and implementing cross-system working. The role of the Infection Control Manager has been replaced with that of the DIPC but the Associate Nurse Director's role still exists. There is a leadership team which is a triumvirate i.e. DIPC/ICM, the Associate Nurse Director and the Lead Infection Control Doctor. This is a model used widely in NHSGGC.

Infection Control Team (ICT)

Infection Control Team (ICT) Structure

98. When the Queen Elizabeth University Hospital (QEUH) first opened in 2015, the ICM role was board wide and covered more than just QEUH. This was also the same for the Associate Nurse Director and Lead ICD. Each sector has its own team (ICD, LICN and ICNs). Initially we thought the team for the QEUH campus could be a single team and this would ensure additional resilience however, it became apparent that the RHC did need its own separate team and we implemented this quite quickly.

99. The sector teams were North, Clyde, South Adults, South Paediatrics and Partnerships. We tried to allocate resources based on the number of beds but the south did tend to have more because of the number of specialist services. As well as being lead ICD, Dr Inkster tended to cover the role of ICD for the paediatric service (previous LICD also did the same) and various people shared the adult hospital.

100. Dr Inkster made some changes but did not have any input in the structure of the IC nursing team. In January of 2019 Dr Armstrong approved additional ICD sessions. The ICNs met every Wednesday and our meetings were minuted. I believe it was the same for the ICDs. I cannot remember if Dr Inkster asked for or if I shared the minutes from the nursing meeting. At the lead nurse meeting we discussed IC nursing issues that the ICD would not

be traditionally concerned with, i.e. cleaning services specifications, nurse education, Health Care Inspectorate action plans, local audit results etc. We did share learning from incidents and outbreaks across the nursing team. There was a formal SMT chaired by Mr Walsh that brought much of this together and this met monthly.

101. Within the ICNs structure there is also the surveillance team, which is a Board team. The Associate Nurse Director line manages this team and it was led by a Lead Nurse. The Surveillance LN would manage the surveillance nurses and data managers and administrative staff. There primary function is to collate and analyse data to provide reports and the surveillance of surgical site infection.

102. In the Director role I hold the budget for the IC Nursing and the Surveillance Teams. Within this resource, I transfer funds to the Diagnostic Directorate to support the payment of sessions to support the post of LICD and some additional responsibility monies for the post of Deputy LICD. The role of the ICD has changed significantly over the past several years and I always try to ensure that I highlight the additional challenges and try to secure extra funding for ICD sessions. I have recently been successful in securing additional sessions, however, ICDs are highly trained individuals who are also consultant microbiologists and as a result are an acknowledged scarce resource, so at the moment it's more about the availability of ICDs and not financial resource.

103. I have been asked how many ICDs work at the QUEH now and how many sessions they have between them. There are three ICD that currently work in QEUH/RHC and they have 11 sessions between them.

104. I have been asked how many ICDs worked at the QEUH when it opened and how many sessions did they have between them. I was not the ICM at the time so I am unable to confirm numbers of sessions and ICDs in 2015.

105. I wasn't aware of a SBAR coming from the ICDs about the structure of the IPCT specifically. The structure of the team had been in place since 2008 and had functioned well up until 2014/2015. There were no problems with the teams in any other sector. I am not sure that anyone articulated to me what they felt was wrong with the structure, although I was aware of conversation about where best the team should be placed in the organisation (corporate services or within diagnostics). The same basic structure, with sector teams and an SMT is what is in place currently. It continues to be located within corporate services and has been since 2008. There was some reference to this in the 2017 SBAR from Drs, Redding, Peters and [redacted] "roles within the infection control team are unclear and appear to have changed eg the lack of formal involvement of the IPCT including an ICD in the planning and commissioning of the QEUH **(A38694873 - SBAR dated 3 October 2017- Infection Control Issues at QEUH - Bundle 4, page 104)**. ICDs are not being informed of HAISCRIBE meetings and incidents in a timely manner" but if this is what is being referred to the response recorded in the 27 point action plan in December 2017 stated that "The current IPCT all have Job Descriptions which have been in place for ten years **(A38759270 - Action Plan arising in response to SBAR - 3 October 2017 – Bundle 27, Volume 4, page 338)**. There is a clear documented governance structure that has been reviewed by Price Waterhouse Cooper and approved by the Infection prevention Committees within NHSGGC. There is a clear management structure which complies with the recommendations contained within the Vale of Leven Report and the Healthcare Environment Inspectorate Standards."

106. I have been asked about the meeting in October 2017 with Professor Brian Jones (Head of Microbiology) (Brian) about changing the structure and bringing the whole unit into the diagnostic structure, but I do not recall the meeting. I was on annual leave from the 6 October until the 2 November. I can find no reference to this meeting. I have been asked if I remember attending and speaking at the meeting. I do not.

107. To me, it is unimportant whether the team is in diagnostics or in corporate. In 2008 prior to the reorganisation of the service the IPC team was part of diagnostics.

108. I am aware that when Dr Inkster came back from sick leave she was unhappy that conversations had occurred with regards to the proposition that the LICD sessions should be managed by the microbiology management team. I believe this was done as it was felt that the dual reporting lines was causing some issues. I know Dr Inkster resigned and then changed her mind and continued as LICD.

Reporting Structure

109. The reporting structure was and is still complex. Mr Walsh as the ICM reported to the HAI Executive Lead who was at that time Dr Armstrong. This was consistent with government policy. When Mr Walsh met with Dr Armstrong he would often ask myself and Dr Inkster and previously Professor Williams to attend with him. Mr Walsh was not an IPC practitioner and he did this so that we could answer any clinical questions Dr Armstrong might have had. The HAI Executive Lead is now Professor Angela Wallace.

110. I think Dr Inkster thought that because we went together that she had a direct line to Dr Armstrong but that was never my understanding of the structure. When I agreed to acting up into the post of ICM I was informed that as ICM that I formally managed the LICD sessional. When I attempted to do this I was firmly rebuffed both by Dr Inkster and her Microbiology Line Manager, Dr Peters. There is an established management structure within diagnostics that the microbiology consultants would report up through.

111. It was slightly more complicated when Professor Williams was the LICD in that he was also, if I recall correctly the Head of Service as well as the LICD.

112. When Dr Inkster was appointed as lead ICD my understanding is that she would report to Mr Walsh for her ICD sessions but for her sessions in Microbiology the reporting line would have been to Head of Service for the South Sector, i.e. Dr Peters who would report to Head of Service for Microbiology, i.e. Professor Jones and so forth up the medical management line.

113. I found when working with Dr Inkster she would quite often informally go to Jennifer directly as would I if there was an emerging issue that one of us needed to report on. It could be any of us and we normally did this collaboratively. I considered it an effective way of working. The same system was in place when Professor Williams was LICD.

114. I was responsible for writing and sending the Wednesday IPC update report. This report was a brief summary of any incidents and outbreaks that were ongoing and which had scored red or amber using the HIIAT. How we were performing with regards to the SG performance indicators and if there were any cases of C. diff that were considered by the clinical team to be severe of if a patient died of C. diff and it was either a primary or contributing factor if the patient has passed away. If we considered that something had to be escalated, one of us would do it as soon as possible.

115. Tom Walsh was not an IPC practitioner and didn't have to be so he would on occasion require IPC clinical input.

116. The reporting lines can appear complicated but in my experience it works in practice. The solution that the organisation considered was locating the IPC nursing service within diagnostics. As ICM I would have reported to the Director of Diagnostics and the Director of Diagnostics would report to the Chief Operating Officer (COO) for acute services. It may have been a clearer structure for the team but it would have had its challenges in that we provide services to both acute and partnership areas, i.e. mental health and community and this change would have located the team within Acute Services. I believe that there was a debate at the time this was being

considered about whether because of the direct route of the ICM to the Executive Lead and the responsibility for community and mental health services it would be better left in corporate services. No change ever took place so at the moment IPC Nursing team continue to be part of corporate services.

Senior Management Teams in Infection Control

117. The IPC Senior Management Teams (SMT) was as previously described, i.e. the ICM, LICD and ANDIPC. ICM reported to the Executive Lead for IPC who was Dr Jennifer Armstrong and is now Professor Angela Wallace.

118. We have a wider SMT that meet once a week. This is the IPC SMT plus the lead IPC Nurses and ICDs from each sector. Prior to the pandemic it met once a month. One month would be focused on management issues, e,g, Healthcare Associated Infection Reporting Template, any updates to HR policies, reports from sub groups etc and the next month it would be a clinical meeting where we shared experiences and considered emerging issues or shared research or learning.

119. Each Thursday we would have a meeting in QEUH and present would be ICM, LICD, ANDIPC, NCIPC and Anne Kerr Lead for Surveillance. The people in the roles in this group changed over time as Pamela and myself acted into interim posts. It wasn't a formal meeting. It was more of a catch-up, so everybody knew what is going on and who was leading on what.

Clinical Data

ICnet System

120. The Data Manager's role in terms of data management and analysis is largely dependent on information extracted from IPC case management system (ICNET). It is the repository for all IPC data. For example, if a nurse on a ward is worried about a patient with a potential post-operative wound

they would take a swab of the wound, it would then go to microbiology the laboratory would test for all sorts of bacteria and if it was positive for something this would be authorised by the lab and go into the laboratory system. Once in the laboratory system this information is automatically sent to ICNET (there are rules set up with regards to what comes through from the laboratory but in the main it is based on lists of organisms in appendix 13 of the NIPCM) **(A42378956 - NIPCM - NHS NSS - Version last updated 4 October 2021 (contains references to a relaunch on 11 July 2022 and the copy being generated on 2 February 2023) – Bundle 27, Volume 4, page 165)**. ICNET will then send the result to the appropriate team and it's picked up by the Infection Control Nurses. The surveillance nurses review information that has come into the system both from microbiology and from the theatre systems and this facilitates the surveillance of surgical site infections. Other systems link to ICNET an example would be TrackCare. The data team manage this information and put all different reports together.

121. I have been asked to explain the Track system to a non NHS reader. TrakCare is a patient administration system within acute hospital sites. This system holds details about patient appointments, consultants, GPs and it records the patients journey from referral to discharge. Clinicians can make referrals and appointments electronically; manage the patient's journey; produce clinical and appointment letters; book and check the results of investigations for example, blood tests, in this system.

122. To illustrate the above, as an example, the surveillance nurses will review any patient who has either been readmitted unexpectedly or who has a positive result from microbiology to determine if this patient may have a wound infection in one of the categories they carry out surgical site surveillance on, e.g. hip replacement. They will review each case and use a set definition to determine if this is a possible wound infection. If they think that it meets the definition they will send information to the patients consultant to determine if they agree. If yes, it becomes a case. The denominator data comes from the system too, and this allows the data team to work out a rate. This information is included in the Healthcare Associated

Infection Reporting Template but also goes as a separate report to the orthopaedic service. Information collected would be sent to ARHAI and this would be included in a quarterly report for Scotland. If there are a higher than expected number of cases (local intelligence and data over time) this if flagged to the ICD for the area and the clinical team and this may lead to an IMT.

123. I consider the ICNET system to be robust, however it requires ongoing development and upkeep. It is not simply something that you can use without support. It has been the system in GGC (IPCT) since 2010. At the moment SG is scoping what would be required of a national system. The development of the system has been done over many years. Many years ago an ICN would have had to visit microbiology and collect positive results etc, everything is automated now.

Triggers

124. The lead Surveillance Nurse is responsible for the management of the system and the surgical site infection component of the system. We set triggers, for example, if you have a patent with C. difficile isolated from a stool specimen the process is that an ICN will go to the ward, speak to staff and the patient, give advice and collect data. If however two patients in the same ward test positive for C. diff in a two week period then this is called a trigger and it is flagged automatically by ICNET. After review of the information by the ICNs the patients may be discussed with the ICD who may decide to have a PAG or even an IMT.

125. The system does have some limitations. Generally, we use the two week time frame for many of our alerts but lots of infections have different incubation periods so this is not a perfect system. Aspergillus is quite a difficult thing to diagnose in the first instance. The incubation period can be days to weeks, or even months, so we use a 48-hour rule as a tool. It has

traditionally been used for surveillance of HAI, for example it is used to gather data for the point prevalence study but it's not an absolute.

126. As a team we consider and implement triggers for ICNET. We would consider our background rates and local knowledge. These have been reviewed and amended over time. For example, when the manual was updated in July 2017 Dr Inkster reviewed the literature and proposed some triggers for environmental organisms in high risk units. There was no guidance available at that time as to how to carry out surveillance in this group of organisms.

127. If something unusual was identified in microbiology we would rely on colleagues in microbiology to let us know about this. In addition, we receive national alerts, e.g. at the moment there is a large community outbreak of pertussis (whooping cough). There is an element of discretion in some of the infections that are unusual but for most things, the trigger is two in two weeks or two in a week. As yet, we cannot import reference lab reports into IC automatically but we do get these types of reports from microbiology usually via the ICDs. We are hoping we will be able to add these to the system in the future.

The Point Prevalence Survey (PPS)

128. The system works well but as with everything it has its limitations both with regards to the type and amount of information you can gather and the resources required to action. Traditionally our focus is on infections that have the potential to go from patient to patient either by direct or indirect contact. The only time we know every patient in the hospital's infection status is during the point prevalence survey which in the past was done every 4 years (NB not done 2020 and 2024 because of COVID). Every patient in every ward is surveyed, it is resource intensive and takes teams of nurses many weeks to complete. It is done to target resources nationally and locally. The PPS consider all hospital acquired infection; chest, wound,

urinary tract and skin and soft tissue infections. Whole system real time surveillance does not exist in practice so we prioritise and use the NIPCM list of alert organism and conditions and nationally available data **(A42378956 - NIPCM - NHS NSS - Version last updated 4 October 2021 (contains references to a relaunch on 11 July 2022 and the copy being generated on 2 February 2023) – Bundle 27, Volume 4, page 165)**. We do not for example know which patients have a urinary tract infection or a chest infection.

129. The PPS will inform the national indicator work, so for example, a few years ago E. coli bacteraemia surveillance was added to the list of infections that we should focus our attention on to try and reduce them, so in addition to our alerts we would have national targets based on this survey and we would collect information on and devise strategies to reduce them based on this information.

130. We would use the Point Prevalence Survey to give us a baseline so that we could focus our attention on particular infection or sites. When completing the survey, we comply with what we are supposed to do using the PPS protocol. If a microbiologist was to ask us how many line infections are in the renal unit we would not have the answer to this. Line surveillance is resource intensive. We have done this in very specific circumstances, normally at the request of clinical teams who have experience of their own patient groups and have local intelligence of what might be normal background and what is not. The results of the Point Prevalence Survey for QEUH/RHC demonstrated that the rates of HAI in these hospital were comparable if not better than the rest of Scotland and also the majority of the hospitals in GGC.

131. In the 2017 SBAR from Drs Peters, Redding and [redacted] they stated that "There appears to be a lack of resources to investigate potential outbreaks /increase in infection rates e.g. neuro surgical rates of EVD infections." this was their perception, it was not as far as we could see based on any analysis of data. Normally this type of issue is flagged by front line clinical

teams and it would be the role of the ICD to link with clinical teams and make decisions around this type of issue and direct the collection of information to inform decision making.

132. I have been asked whether there are disadvantages of the PPS, in that it captures only a particular point in time and doesn't inform as to how a patient acquired an infection. Absolutely, it is limited in that it is a single point at time and only identifies if that patient has a hospital acquired infection not how they acquired it.

133. The PPS was carried out only one year after the hospital opened, and I am asked whether I agree this was before many of the issues with the building were known. The PPS identifies infections that I would suggest in most cases manifest in hospital and are endogenous in origin.

134. I am asked when would I consider trends and numbers of non-mandatorily reportable organisms. Please refer to paragraph 92 and the answers below that paragraph.

Comparison of hospital data

135. In an effort to try and establish some baseline data for the specific hospitals we approached ARHAI in 2019. We wanted to see how the RHC and the QEUH performed in terms of hospital data for the key indicators, i.e. CDI, ECB and SAB. These were by no means perfect examples but it was the only nationally available contemporary data available. We asked if QEUH/RHC could be compared to peer hospitals to see if they were different. ARHAI confirmed that they were not, and the indicators all fell within the confidence intervals.

136. I have been asked were the peer hospitals used for comparison newly built or older than QEUH? I believe they were older.

137. I have been asked whether I think comparison of a newly built hospital with older hospitals is a fair and accurate one. In terms of CDI, which is transmissible from patient to patient then no but the other two are more complicated. As stated above, these indicators were only chosen because it was the only nationally available contemporary data.

138. I have been asked whether a newly built facility should be aiming higher in terms of eradicating HAI infections. I think you could argue quite robustly that the single room accommodation in QEUH and RHC should reduce the transmission of infections from patient to patient. However, we will never eradicate healthcare associated infections as long as we continue to deliver clinical care that compromises the patients' main defences against infection, e.g. their immune system (steroids) skin (surgical wounds, intravenous devices), gut microbiome (antibiotics).

139. I have been asked who analysed the data. ARHAI analysed the data.

Infection Control interaction with other groups

140. My experience of working with teams in Estates and Facilities has been a positive one.

141. One example of team working is the HAI SCRIBE process. On occasion the time given to respond to requests to review documents may be less than we would expect. Although we participate extensively in the work of the estates team in maintaining the built environment our primary role is to support clinical teams to deliver patient care. This can on occasion create challenges in terms of competing priorities especially when the clinical areas are very busy. The HAI SCRIBE process assesses risk in order to apply appropriate controls to protect patients.

142. I have asked about my knowledge of HAI SCRIBE, for example, how it operates in practice, time limits, ownership of process. I do not contribute to

the HAI SCRIBE process in my role but in summary, if work in a clinical area is required to be undertaken the Estates Department would start the process and complete some of the document and then sent it to the IPCT team at the site to review and amend where necessary. IPCT ask for two weeks to complete this process but occasionally the work may be urgent so a more rapid response is required. The document asks that we review the scope of the work to be undertaken, the types of patients that may be in the area, and then based on these two pieces of information controls are recommended. The document states that it's up to the NHS Board to determine who has ownership of this process. In GGC the SCRIBE process is led by colleagues in estates or capital planning.

143. GGC IPCT have many points where they link with colleagues in ARHAI (HPS)/HFS. Members of the IPCT sit on groups within ARHAI and NHS Assure. This type of collaboration which informs national policy has been in place for many years. If there is a major incident we are able to request assistance as was the case in 2018. We have had mandatory reporting of outbreaks and incidents to ARHAI for many years. ARHAI brief SG colleagues on incidents and outbreaks across Scotland. We don't always request support it depends on the type of incident. Rarely IPC colleagues from SG would attend incident meetings but this did happen in 2019.

144. I have been involved in many national working groups over many years. Some of these groups would complete the task set and be stood down and some were ongoing but the membership would change. There is an ICM network and an ICN network for Scotland. Recently I was asked to represent the ICM network on CNRG. This group has now stepped down as we are out of the acute phase of the COVID 19 pandemic. CNRG stands for COVID-19 Nosocomial Review Group (CNRG)

145. Now known as the National Support Framework **(A40562750 - National Support Framework 2017 – NHS NSS HPS – Version 1.1 - June 2018 - Bundle 27, Volume 1, page 665)** the CNO algorithm can be triggered by SG HAI/AMR policy unit or the NHS Board to optimise patient safety during

the following; any incident any healthcare incident/outbreak(s)/data exceedance or HEI inspectorate visit/report. This framework replaces the CNO Algorithm 2015. This process if triggered requires ARHAI to complete the actions listed below. Support from Health Protection Scotland (HPS) and Health Facilities Scotland (HFS) was sought at the outset of the incident in 2018 and both attended IMTs. The National Support Framework was triggered by the Chief Nursing Officer (Scottish Government) (CNO) on 22 March 2018.

146. I have been asked what the CNO algorithm is. The National Support Framework (previously the CNO algorithm) is a structure that sets out the roles and responsibilities of organisations in the event that a healthcare infection outbreak/incident, data exceedance or Healthcare Environment Inspectorate (HEI) report deems additional support to an NHS Board is required.

Extract from the document;

When the SG HAI/AMR Policy Unit invoke the Framework they will:

- Inform the appropriate NHS Board Executive Lead or deputy that the National Support Framework is being invoked and the rationale for this.
- Inform Health Protection Scotland (HPS) of the invocation citing the reason: this would normally be to the Lead Consultant for HAI or Associate Director who will then assign to a NCIC. The NCIC will inform the HPS HAI IPCT.
- Request HPS action, a healthcare infection situation needs assessment to be completed within 5 working days http://www.nipcm.hps.scot.nhs.uk/web-resources-container/sbar-haisituation-needs-assessment/ .
- Instruct HPS on the expected leadership and coordination of all national activity and communicate with the SG HAI/AMR Policy Unit accordingly.

When the Framework has been invoked by SG HAI/AMR Policy Unit, HPS will:

- 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
- 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.
- 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.
- 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.
- Contact other national agencies e.g. Health Facilities Scotland (HFS), Healthcare Improvement Scotland (HIS), HEI to request support or clarification if required.
- Support the NHS Board until all actions is completed, identifying any gaps in national guidance and tools as appropriate.
- 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.
- Report any failures to complete actions as planned/agreed to SG HAI/AMR Policy Unit and appropriate NHS Board Executive Lead.

- 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.
- Consider the need to share lessons with NHSScotland and other stakeholders.

147. The Public Health Protection Unit (PHPU) is part of NHS GGC. Dr Iain Kennedy was our main link to PHPU before Dr Kennedy we would have contacted Dr Eleanor Anderson. They would attend IMTs or invite IPC representative to attend IMTs for community outbreaks/incidents that might have an implication for in-patient care. Dr Kennedy also sits on BICC and AICC.

148. It is not within my role to instruct external experts but my team could advise that these may be necessary/helpful. I imagine there is a process in place but I am unaware what this is.

149. I am aware that water experts were brought into the water technical group however, I was not a member of that group so my knowledge of this is limited.

Culture within the Infection Control Team

150. I was not aware of an accusation of a culture of bullying within the ICDs, until I was called into a meeting with Bridget Howat, who was head of HR for corporate services and David Stewart who was Deputy Medical Director. This was in September 2015. I thought it was a general chat and then I realised it was based around questions regarding Professors Williams. I was quite shocked, it was only at that point that I realised that there may be an issue with ICDs. I was asked if I had ever witnessed bullying or shouting and I said I had never witnessed that type of behaviour from Professor Williams. I

did not experience any misogynistic behaviour from Prof. Williams, I always considered that I had a good relationship with him.

151. I consider that the IC team have always interacted well with microbiology both in the past and the present. When I was an ICN I would meet with a ICD/microbiologist daily. This was in place in several sites I had been based. I've known Professor Brian Jones and Dr John Hood for almost 30 years and Dr Bagrade for over 15 years. As an ICN I would have visited the various benches in the laboratory and picked up referrals. Then I visited the ward. That was the system for a long time before it became automated. The system for obtaining referrals became automated around 2010 and 2011, so we stopped going to the lab as the referrals came through ICNET. I do still however consider that we have strong ties and relationships with our colleagues in microbiology/virology who I now have weekly meetings with.

152. I have interacted with the vast majority of the microbiologists because they give IPC advice out of hours and many rotate and become members of the team as part of their training. When we stopped visiting the service you did not know the technical staff in the laboratory as well as you may have done before. In general terms if there was no ICD available I could ask another microbiologist for advice.

153. In the past there was a microbiology laboratory in Royal Alexandra Hospital and the Clyde team were located there. The Clyde lab does not exist now. Initially the ICD from Clyde was located in microbiology in the north but over time that has changed as roles have. The relationship with the South laboratory was not the same as that in the North or Clyde during a significant period (approximately 2016-2019). The ICDs who are currently in the South have office space with the ICNs out with the laboratory. The relationship with the ICDs in the south is currently very good but there was a point in time where this was not the case and I consider that the relationships were challenging. They certainly were for me.

154. I think at the time that I thought that the reason for the changes stemmed from both the automated system and personalities but I was happy to try and work through any issues if possible. Pamela Joannidis, I and two other colleagues from the IPCT nursing team approached the Royal College of Nursing (RCN) because we had a concerns about our experience of working with colleagues in the south and our concerns regarding how this type of behaviour was impacting on the wider nursing team. We felt our actions and judgement were constantly being questioned and we were made to feel that we were simply doing as little as possible which was far from the truth. We were well resourced as a nursing team and I always felt supported in this but if we couldn't do everything that was asked of us we were made to feel inadequate. The most hurtful implications was that we did not care about patients and that is simply not true.

155. I experienced what I consider to be a huge amount of pressure and stress at that time and I think it was fair to say that there was a real sense of injustice. Pamela and I had spent our entire careers making sure things were safe, that systems and processes were in place and that nurses were supported, well trained and proactive in their practice. I consider that problems began when Dr Peters was appointed in 2014. Dr Peters had very fixed ideas of how she wanted things done and was not amenable to working in partnership with colleagues. This position was confirmed in the 2018 whistleblowing report (ventilation at the QEUH and RHC) in which it was noted by the author "I discussed these concerns with everyone interviewed. I heard an unfortunate but consistent circumstance about the situation summarised below:" **(A34427379 – NHS GGC – Step 2 Whistleblowing Report – dated May 2018 - Bundle 27, Volume 3, page 472)** The points summarised which were relevant to IPCT were that "she (Dr Peters) does not accept being part of team and listening to the views of others, she does not accept the infection control is a nurse led service, she sends frequent requests for updates which are not directly relevant to her role." At the time in 2016 I believed this was why she stepped down from being an ICD. I considered that my relationship with Dr Inkster was on the whole a good one and I was happy to work with her when she was the Lead ICD.

156. During the meetings of the IMT no-one ever flagged to me that there was an issue with the quality of minutes. All of our administrative staff have been in post for many years. Minutes were always sent out for comments and were amended if necessary. Calum MacLeod did a lot of these minutes and was familiar with the members and the terminology. Calum MacLeod was the Infection Prevention & Control Administrator.

157. In general terms it would be highly unusual for the conclusions/recommendations of an IMT to be overruled. I believe that this is as a result of the respectful conversations which occur at IMTs which consist of frank discussions regarding the relative risks of actions recommended and possible solutions. It is my experience that the IPCT are respected and that other colleagues are aware that we will do everything to find a solution which is the best for all concerned. Patient safety is always prioritised.

Culture within ICT - 2014 to 2015

158. The role of the ICD had changed over the decades. When I was an SICN in Stobhill the ICD was Dr Giles Edwards. Dr Edwards was a consultant Microbiologist and ICD. Dr Edwards was available should I need him for anything but he had what I would consider to be a light touch with regards to IPC. Latterly ICDs are much more interested in expanding the service scope and I welcome this development as our patients are more vulnerable and the emphasis on the built environment has shifted over the years with water and ventilation expertise becoming more prominent and the ICDs are the experts in this field. This can only benefit patients.

159. Dr Peters has expectations that if she gave a recommendation that it should be followed immediately. One example was a patient in HDU with human metapneumovirus virus. She asked the LICN to ask all of the staff in ITU to wear a FFP3 mask. This was out with national policy and our local SOPs which had gone through a rigorous consultation and governance process.

IPCT adherence to National Policy has been portrayed as simply doing the minimum. This is not a true reflection of the position. The NIPCM is evidence based **(A42378956 - NIPCM - NHS NSS - Version last updated 4 October 2021 (contains references to a relaunch on 11 July 2022 and the copy being generated on 2 February 2023) – Bundle 27, Volume 4, page 165)**. Putting in actions in excess of this could have negative consequences for patient safety and I believe the NIPCM was proportionate. I have explained the governance structures for the SOPs in previous paragraphs. An agreement from colleagues from various backgrounds and points of view in my opinion supports safe practice, not the opinion of one individual. Systems and processes have to be the same across the board as staff move from area to area and patients deserve the same care regardless of where they are. As an example, COVID 19 clearly demonstrated the difficulties staff had communicating with patients and colleagues when they were wearing a mask, this posed challenges in terms of support for patients and communication of key instructions.

160. The LN IPC spoke to Dr Peters and explained that this was not in our SOP's and this was not well received. This was a pattern repeated with any question or challenge being received negatively rather than as a mutually respectful conversation with agreement on a way forward. The SOPs could always be changed both by expert opinion and emerging evidence but there was a process to do this but that did not seem to be acceptable to Dr Peters.

161. There were other expectations that the local teams would prioritise anything that Dr Peters felt was important. The nursing team had responsibility for many aspects of IPC and this was stated in an agreed work plan and programme based on national priorities. We encouraged new areas for development but respectfully asked that available information was collected and that there was agreement with clinical teams that this was a priority/concern before we undertook any new areas of practice which may have a significant impact on IPCT resource. Ideally it would be something that would have been an improvement across the board. Again this did not

seem to be acceptable to Dr Peters. The LNIPC from the South adult team was one of those who attended the meeting with the RCN in 2017.

162. An example was the email from Dr Redding (Feb 2018) suggesting that colleagues in QEUH had expressed concern that IPCT were missing infections in the Institute of Neurological Sciences (INS) questioning the robustness of the definitions used. This was surveillance that was already ongoing in the INS since 2016 (incidentally in excess of any national requirement for mandatory surveillance of surgical site infection). Dr Inkster responded and asked for patient details which were not forthcoming but the expectation I believe was that we extended both the definitions (definitions used were based on Centres for Disease Control (CDC) surveillance system) and the scope of the surveillance based on “expressed concerns” and alleged “missed infections” with little evidence.

163. I have been asked whether, in 2015, a suggestion was made to ICNs that they shouldn’t discuss issues relating to RCH with Drs Inkster and Peters. I do not recollect this specifically but it would have been appropriate to direct ICNs to ICDs for advice when Drs Inkster and Peters stepped away from the sessions they undertook as ICDs.

164. After Dr Peters demitted her sessions as ICD she was appointed as the Lead Consultant (Microbiology) in QEUH. She continued to request updates on many topics, patients, incidents, building works etc. She would also send information on patients across despite me contacting her directly and informing her that the systems would automatically send this information to the teams and that they would act upon these. She would send information without context, interpretation or potential relevance. In 2018 the recommendation from the whistleblowing process that she and others initiated was that “the infection control team should be supported to deal with multiple e mails from Dr Peters about issues in which she has no direct role with a standard response”. The anxiety caused by this continual undermining of the team, myself included and the scrutiny of any and all actions taken was intolerable.

165. Ultimately nobody felt that they could respond in this fashion because there could be something relevant that we didn't know about and should action. As a team we are focused on patient safety and continued to treat anything that was highlighted with due diligence.

166. When Greater Glasgow and Clyde was formed it was made up of a number of different Trusts all had infection control teams who worked with different systems and processes. When Mr. Walsh and I were appointed, one of the main objectives was to ensure that these were the same across the whole board area. There were a number of reasons to do this; a) single systems allows you to identify areas to focus resources on using benchmarking data, b) we encouraged education and training and for the nurses this allowed them to move through the professional structures into senior posts quickly. Transitioning across teams was made easier and more appealing if the systems were the same c) frontline staff were given the same support and advice no matter where they practiced.

167. I think it should be noted that the ICDs did not resign; they stepped away from their sessions with immediate effect. Local connections and intelligence is important so when all the ICDs stepped away at the same time with no notice this did cause myself and the local teams some anxiety. The ICDs in the other sectors were understandably reluctant to step in and help so at times it did mean it was more complicated to obtain advice. In response to the actions of the ICDs it was suggested that there should be a generic mailbox. I was concerned about this for a number of reasons; a) you didn't know if anyone had picked up the request for advice, b) it was monitored by a different person every day but if there was an ongoing incident it was more appropriately managed/chaired by the same person c) we were discourage from calling directly but sometimes the advice needed was of an urgent nature and needed a quick response.

168. I have been asked to explain what the layer of complexity was and when that was added. It was simply that we could not pick up the phone and ask for advice and we didn't know if the email had been read or not.

169. I have been asked what didn't feel safe. Sometimes we needed urgent advice. Prof Jones would help if we needed urgent advice but he had not been an ICD for some time, the site was not one he was familiar with and he wasn't available all the time as he had other commitments. Thus the reason for my concern but without a moment's hesitation if I needed advice I would have gone through every layer of management until I had it but we were trying to work our way through this and I knew Dr Inkster would be back at some point, so it was time limited.

170. Mr Walsh supported this process as much as possible and I supported the nursing team. I was very fortunate in that Pamela as the Nurse Consultant had extensive experience not only as an ICN but a paediatric ICN. Unfortunately, it came to the point when I felt I had no other alternative but to approach the Royal College of Nursing for advice and support. This was not just having an impact on me but on the whole team and I had a responsibility to them to highlight these issues. The first meeting was September 2017. In the end after an initial meeting with a local RCN representative we met for a follow up meeting in the RCN offices in Glasgow. Four of the senor nurses including myself attended. The RCN representatives were Paul Devlin and Ann Thompson who was the acting Deputy Director of the RCN (Scotland).

171. The RCN went to see Mags McGuire (Executive Director of Nursing) because she was my Professional Lead. During this meeting Professor McGuire asked Dr Armstrong to step into the meeting. It was agreed that if there was a way to stop Dr Peters behaving in this way with the nurses, i.e. sending frequent requests for updates which are not directly relevant to her role, that we would leave it at that. We did escalate it and I wrote to Jennifer to let her know that a number of us had gone to the RCN. I have been asked whether the agreement to reduce interaction or stop interaction entirely. It was to reduce.

172. In 2017 Dr Peters compiled a large report regarding Mycobacterium abscessus, an organism which is relevant in patients who have cystic fibrosis **(A32403830 - SBAR dated 19 January 2017- Mycobacterium abscessus investigation - Bundle 4, page 60)**. She said that Professor Williams had withheld information from her and had been assisted in this by Pamela Joannidis. Dr Peters also implied (using screenshots from documents within the IPC shared drive which she should not have been accessing as she was not an ICD) that both Pamela Joannidis and Senior Nurse IPC Angela Johnstone had inappropriately changed minutes of meetings. I had to refer these accusations to Information Governance colleagues for investigation. This was not upheld and Dr Peters had to modify her report. This report was not requested by nor considered by any formal group. The proper procedure would have been to contact me if Dr Peters had concerns about Pamela.

Culture within ICT - 2016 to 2017

173. Dr Inkster was appointed as the Lead Infection Control Doctor in April 2016. I knew Teresa from our time at Western Infirmary and always felt that had a good working relationship with her, although she was not an ICD then. At the point Dr Inkster was appointed the ICT were working well together in the other sectors but Dr Peters was still the ICD in the South team so this was still a challenge in terms of relationships with the local team.

174. In June 2017 Dr Inkster [redacted] when she returned in January 2018, she resigned almost immediately. I was aware that some restructuring of ICD sessions and reporting lines has been suggested but this was been taken forward by colleagues in microbiology and the ICM. It would have had little impact on the nursing team so I was not closely involved in these conversations. I believe that at some point I must have had a conversation with Mr Walsh or Dr Armstrong and commented that I felt my professional opinion was not particularly respected by Dr Inkster. After

the issue of her resignation had been resolved, she came to see me and apologised if this was the impression she had given to me and that she did respect my opinions.

175. In September 2017, Professor Brian Jones provided senior leadership with regards to the ICD sessions. He was the Head of Service for Microbiology. This was when the ICDs in the South stepped away from their sessions as ICDs. At the time Professor Jones provided leadership to ICDs. It was fair to say that the ICDs in the South looked to Dr Inkster to take on board some of the more significant/complex issues and I think the ICDs did not have the same type of experience. I also believe they were being undermined by Dr Peters. Professor Jones provided senior support at what was a very difficult time.

176. I have been asked which wards he was responsible for. He didn't have wards, he was someone that the ICDs could escalate concerns to if they felt they were unable to deal with an issue they felt was out with their competence. I have been asked what gave cover to the junior doctors. As above.

177. I was aware at a couple of points that Teresa was struggling with Drs Peters and Redding in early 2018. This was after the microbiologists had submitted their SBAR with their concerns which was explored in the meeting in October 2017 **(A36591681 - Infection Control Issues meeting minute - 4 October 2017 - Bundle 27, Volume 4, page 331)**. There was a continual demand for updates on progress and I know that Dr Inkster tried to address these directly as much as possible.

178. I have been asked, in summary, why was Dr Inkster struggling with Dr Peters and Dr Redding. Constant requests for updates on the progress with issues that had been identified in October 2017.

179. I have been asked which wards did Dr Inkster have responsibility for. Dr Inkster had oversight of all of the IPC ICD activities across the board with a particular responsibility to Royal Hospital for Children.

180. I have been asked whether there was a desire to keep Dr Inkster away from areas of controversy. Not that I am aware of.

181. Teresa continued to have questions sent to her from Dr Redding, who continued to ask for updates on previous issues and reporting anecdotes. When Dr Inkster had asked for specific information, e.g. patient details nothing was forthcoming.

182. I felt I had to try and support Teresa at that point in time because it was a general feeling that we were under quite a significant amount of pressure from lots of sides.

183. I have been asked why was the raising of issues by Dr Redding viewed as having “problems”? A number of issues raised could not be put in place quickly but there seemed to be an expectation that this could all be done at pace, for example, replacement of the pipework/plumbing in the institute for neurological sciences. Dr Redding was assured that there would be visibility of this process through all of the governance groups throughout NHSGGC for her assurance which would have been a normal process.

184. I have asked what the problems were. Please refer to the 27 point action plan prepared in response to the meeting held on the 5 October 2017 **(A45323785 - Action Plan arising in response to SBAR - 3 October 2017 – Bundle 27, Volume 4, page 338)**.

185. I have been asked why I supported Dr Inkster. As a team, mutual support is a core value. I was also concerned for her personally as she had only recently returned to work.

186. I have been asked what did I did to support Dr Inkster. I was happy to try and assist her in any way I could.

Culture in ICT – 2022

187. Currently the GGC IPCT is a multidisciplinary team who support and respect each other's views. We work collaboratively to solve problems and to develop the IPC service. We meet once a week as a SMT (all of the Lead IPCN/ICD/LICD/ANDIPC/NCIPC/Clinical and Healthcare Scientists). Myself the ICDs/ANDIPC/LICD have a catch up on a Monday with issues from the weekend addressed. One of the actions from the Organisational Development work that Professor Wallace commissioned was to have a weekly multi-professional meeting i.e. 'Tuesday buzz'. This was to facilitate cross profession collaboration. Membership included members of the IPCT, Senior Managers within Microbiology and Diagnostics, Clinical Director for Laboratory Medicine, Head of Service (Microbiology) Virology and Microbiology colleagues. This 'buzz' continues currently and is a space where we can share intelligence and mutually assist and support each other.

Issues Impacting the Infection Control Team – 2017
HAI Scribe

188. Prior to Dr Inkster's [redacted] my understanding is that she was fully involved in the proposals for the work to be carried out in ward 4B. This work was supported by HFS/ARHAI with input from Public Health England. The proposals had gone through all of the appropriate governance forums and Dr Armstrong had shared the document that was submitted to the Acute Services Committee in March of 2017 with Dr Inkster (Please refer to RFI 7). The HAI SCRIBE document was populated and sent to LNIPC, Lynn Pritchard and [redacted] in July 2017 for comment and amendment prior to the proposed works commencing on the 21 August. On 6 July [redacted] responds "as long as all measures compliant with the level and

grade of risk and agree with Lynn's comments. Would be good to confirm Lynn's question about the stage. The patient risk level is group 4." **(A40241404 - 21.8.2017 - Email - Calum McLeod to Sandra Devine attaching 1) 19.6.2017 - HAI-SCRIBE for Ward 4B En-suite ceiling replacement and 2) email - [redacted] confirming patient risk level is group 4 – Bundle 27, Volume 7, page 601)**. On 22 August [redacted] halted the process stating that Dr Peters had advised [redacted] that Dr Inkster was not happy to sign off the SCRIBE despite being involved in the process. Professor Jones eventually signed off the process with me after being fully apprised of the extensive governance process in relation to this work.

189. I have been asked what the nature of the issue was with Wards 4C and 4B. 4B was being modified in order to facilitate the BMT patients returning from the Beatson.

190. I have been asked when I first became aware that the ventilation in these wards was not to the standard laid down in STHM 03-01. In my limited understanding SHTM 03-01 does not make recommendations/reference to the standard of ventilation required in BMT units.

191. I have been asked whether I can give an approximate date when this occurred. I am aware that Prof Craig Williams raised issues re ventilation in June 2016.

192. I have been asked whether anyone suggested to me that a senior ICN should spend a couple of sessions working within Estates, due to the volume of IC work in the HAI SCRIBE, whether I took that suggestion forward, and if not, why not. Not at that time. I have subsequently tried to recruit to this post but this is not an Infection Control Nursing role and the recruitment process has been largely unsuccessful. Anyone undertaking this would need extensive training to be deemed competent.

193. There was a lot of debate about this scribe because Dr Inkster's name was on the original version of it, and when she returned to work she considered this to be a fraudulent use of her name. My interpretation of this issue is that the intended sign off was to be by Dr Inkster and quite often these documents are prepopulated. I don't believe this was done deliberately. It was an electronic signature. [redacted] initially seemed to be content with the document and proposed works, however Dr Peters was not. [redacted] then said [redacted] did not think [redacted] was qualified to sign the SCRIBE document, so Professor Jones did it with myself.

Update to National Infection Prevention and Control Manual – 2017

194. At this point there was quite a lot going on. We had had an update to the manual in July 2017, so we were getting more referrals into paediatrics **(A42378956 - NIPCM - NHS NSS - Version last updated 4 October 2021 (contains references to a relaunch on 11 July 2022 and the copy being generated on 2 February 2023) – Bundle 27, Volume 4, page 165)**.

195. I have been asked why the update to the manual resulted in more referrals to paediatrics. Four new organisms were included; we had already put two of the four into our systems in previous years, i.e. Pseudomonas aeruginosa and Serratia marcescens but we were now required to include Stenotrophomonas maltophilia and Acinetobacter.

Resignation / Withdrawal of Service of Infection Control Doctors

196. Two ICDs in the south sector withdrew their services at the end of August 2017, Drs. [redacted] and Valyraki. Mr. Walsh approached Professor Jones as head of service citing concerns regarding patient safety if there was no ICD in the South. Professor Jones responded quite robustly to their letter demitting their services, indicating that they must provide advice to the nursing teams in order to support patient safety in the South.

197. I have asked whether I was told why they had resigned? Yes

198. I have been asked what reason was given. Please see email chain **(A46157918 - email Chain from Dr Peters to [redacted] – re request – 23 August 2017, Bundle 14, Volume 1, page 696)** and **(A49645951 - email from Dr Peters to Professor Jones and Isobel Neil – re Request – 23 August 2017 - Bundle 27, Volume 4, page 325)**

199. This is when the generic inbox was set up. (please refer to para 166).

200. I believe it was Dr Peters who came up with the generic inbox idea. She was the Line Manager for the microbiologists with ICD sessions.

201. I believe that this did have a negative impact on the nursing team. I recall there was one occasion when Pamela Joannidis needed urgent advice from an ICD. She emailed into the generic box and tried to phone but no-one was returning her messages. Eventually, she escalated it to Rachel Green (Chief of Medicine) and was told to wait until out of hours so that the out of hours microbiologist had to give her advice.

202. There was another occasion when we had an IMT for a possible increase in surgical site infection in orthopaedics and we had asked for an ICD to come and chair the IMT. Although initially we were reviewing cases of SSI during the meeting based on the information we had it looked like the infection could have been caused by an organism that was very resistant to antibiotics and it also on first review it appeared that the same organism may have been transferred between two patients. This would have been a significant event.

203. As we went into the IMT, it transpired that there might be yet another case in Gartnavel General Hospital. Suddenly we were looking at the cross transmission of a resisting organism across two sites in an extremely vulnerable group of patients. I ended up chairing the IMT meeting because

there was nobody else from IC available. I then had to phone Professor Jones and apprise him of the situation but I did not have all the microbiology information available, the microbiologists in the QEUH did however but as no one attended the meeting this additional information was not available to the IMT. As a consequence and based on this incomplete data we recommended closing to elective trauma in the QEUH until we could collect additional information. The next day Professor Jones was able to gather this information and was able to confirm that these patients' organisms were not the same. This information was available on the previous evening.

204. We were not missing things as implied. We were still getting our referrals electronically. If we had a trigger, the nurses would get patient details and document in ICNET and also in their own team notes. If they had concerns they would discuss this with the relevant ICD who would decide next steps. This rota meant that a different person would be dealing with the issue each day. The generic mail box was not an efficient way to work and I considered it to be sub-optimal and not a way of working supported by any other area of the board.

Incident Management Meetings Overview

205. Please refer to the contents of the GGC Outbreak and Incident Management Plan **(A42362014 - Greater Glasgow and Clyde Outbreak and Incident Management Plan – February 2020 – Bundle 27, Volume 9, page 103)** and the GGC Incident Management Process Framework Document for details on the setting up and process regarding IMT/PAGS.

206. My role was attending where appropriate and contributing to the discussion and taking forward any actions allocated to either myself or the team. Susan Dodd was not that long in post and Pamela Joannidis was a paediatric IPCN, so we brought different experience to the table.

207. On many occasion I had the responsibility of updating the HIIORT with the ICD and submitting this to ARHAI, but not always. I had to ensure that our reporting obligations were met both inside and outside the organisation. Reporting is a standard item on the IMT agenda so it was always clear who would take this action forward.

208. Within the IMT there is an action plan in place, and the expectation is that everything is complete by the time the IMT is stood down. Sometimes there are actions that take longer to put in place, so these may be included in the 'hot debrief' document. There is a "lessons learned" section in the debrief document with regards to what went well and what did not go so well. This is an ARHAI template and is not mandatory but is good practice.

209. Estates and Facilities Management (EFM) representatives are sometimes present at IMT meetings. Their attendance depends on what type of incident is being discussed. If for example water sampling had been requested then they would report back sample results but this could also come from colleagues in microbiology.

210. I have been asked what reporting EFM do in water sampling. Routine water sampling results. Normally if extra sampling is requested then the laboratory would report on results of these.

211. I have been asked whether EFM receive the results. I believe this question is better addressed to EFM colleagues who are more familiar with the process than I.

212. If the incident was for example an increase in MRSA, you probably would not have an Estates colleague attending, however you would have a colleague from facilities in attendance as we would normally request additional cleaning as a control. If for example, if we had an issue with surgical site infection, you might bring a colleague from the Decontamination Unit, which also sits under EFM. It depends on what the issue is.

213. I have been asked what the process is, and steps taken, to end an IMT. Please refer to GGC Outbreak and Incident Management Plan and the GGC Incident Management Process Framework Document.

214. I have been asked how do you decide that an incident is over. IMT decides. Normally when controls are in place, and no more cases are being identified.

215. I have been asked how do you assess that there is no longer a significant risk to public health. Please refer to GGC Outbreak and Incident Management Plan and the GGC Incident Management Process Framework Document but Hospital IMTs are normally about patient cohorts and not public health. If there was a public health issue this would be the role of the Public Health Protection Unit.

216. I have been asked what circumstances would merit a public statement or statement to interested parties, when an incident is over. It's not normal practice to issue a statement that an incident is over. Please refer to GGC HAI Communication Strategy and Guidance for IMTs.

217. I have been asked what, if any, documentation is prepared as a result of the IMT process. Minutes, action plans, time lines. Other colleagues would prepare other reports. A summary of incidents are included in the HAIRT.

218. I have been asked what, if any, report is prepared as a result of the IMT process. ARHAI Hot Debrief. This is not mandatory but is good practice.

219. I have been asked who would prepare the report. The IMT Chair.

220. I have been asked what process is used to summarise the conclusions, results and lessons learned of each IMT? ARHAI Hot Debrief Document.

221. I have been asked what, if any, de-brief meetings take place at the end of the IMT process. Depends on the circumstances. We have had many

hundreds of outbreaks of COVID 19 it would be impossible to conduct a debrief for all incident and outbreaks.

222. I have been asked how soon after an incident is over should a de-brief meeting take place. As soon as possible.

223. I have been asked how do you evaluate how effective the IMT has been for a specific incident. It is the IMT who review actions and the effects of these and any other controls put in place.

224. I have been asked who reports are shared with and how is the report communicated within the NHS.

a) We send a Healthcare Associated Infection Online Report to ARHAI for each and every incident and outbreak. ARHAI colleagues would need to comment on how this is communicated throughout Scotland but they do send reports to SG HAI Policy Unit. We are normally copied into these.

b) Local IPCT will report incidents and outbreaks to the Acute Infection Control Committee or the Partnership IC Support Group.

c) Incidents and outbreaks which score red/amber are communicated to senior officers within the boards in a weekly report.

d) Colleagues in microbiology get a handover report on a Friday and this includes details on ongoing incidents and outbreaks.

e) Board Infection Control committee receive hot debrief reports. There is also an agenda item – emerging issues – which is an opportunity to report real time on anything that is ongoing.

f) Healthcare Associated Infection Reporting Template contains summaries of any red/amber incidents and this is shared with the

committees mentioned above and the Board Clinical Governance Forum, Clinical and Care Governance Committee and the NHS Board.

225. I have been asked who, within the organisation is responsible for endorsing the conclusions of the IMT report. The committees ask questions and note the contents but they would not endorse the contents as the IMT is an independent process.

226. I have been asked what steps are taken by the NHS following the report prepared by the IMT. Please see above. Recently a process has been introduced were an analysis of the themes identified in the hot debrief documents is conducted yearly with any common themes identified and actioned.

227. I have been asked who is responsible for preparing any action plan based on the IMT report. Action plans are normally done real time and prepared by the LICN or their deputy.

Planning and opening of the QEUH/RHC

228. I am aware that there was a debate about whether the new hospital should be located in the North or South of the city. I did not have any strong views on where it should be built. I did not have any involvement in the initial stages of planning, building, or commissioning the new building. In 2008-2009 Annette Rankin who was part of the IPCT was our representative in planning groups. When Ms Rankin left Ms Barmanroy was appointed into this post. Ms Barmanroy regularly attended the IPC lead nurses meeting and would update us on progress or bring issues that she required advice on.

229. I have been asked what, in my role as Associate Nurse Director, I was told about the scope and intent of design of QEUH/RHC. I do not recall ever being specifically briefed but would have been aware through normal board

communications. I think I would have been NCIPC when the conversations about the new build were ongoing so would not have expected to have been briefed specifically.

230. I have been asked whether I would have expected the design of the ventilation system to comply with SHTM 03-01, the national guidance. I would have expected the extant building notes to have been followed.

231. I have been asked whether I would have expected to be told if the ventilation system did not comply with SHTM 03-01. No.

232. I have been asked what, and when, I was told about the addition of the adult BMT unit and Infectious Diseases to QEUH. BMT – 2013 as far as I can recall. BMT required to be adjacent to ITU to meet JACIE standards. ID – 2014 as far as I can recall. ID was driven by clinicians again this is my recollection.

233. I recall in the early planning stages that I attended a meeting with Dr Redding regarding the provision of negatively pressured isolation rooms. At the time we had just experienced a pandemic of influenza so this was at the forefront of our thinking. I recall that we suggested that there should be two negative pressure isolation rooms on each floor. We did not receive an update on the debates that we were told had subsequently occurred where this proposal was rejected by clinical teams.

234. Annette Rankin was the Nurse Consultant for IPC from 2008-2009 and she was seconded to the planning team on a full time basis. In 2010 Jackie Barmanroy replaced Ms Rankin. I was involved in Ms Barmanroy's appointment. Ms Barmanroy was managed by the Senior Nurse for the Project Team. A number of the IPCT team sat on different groups. I was part of the Generic Ward Operational Policy Group as was Pamela Joannidis.

235. As part of the Generic Ward Operation Group there were many conversations about domestic services, including resource and the impact of

new technologies. QEUH was almost all single room accommodation (apart from ITU/HDU) so there were resource implications for all services.

236. I was invited to a number of the meetings of the Critical Care Group because I flagged that there had been a government letter stating that all new builds had to be 100 per cent single room accommodation. Critical care colleagues did not want single room accommodation. They felt it would be too difficult to manage because they would not have the same visibility of patients. They were proposing a derogation to the guidance. My understanding is that Board contacted the Scottish Government regarding these concerns and they received a positive response to a proposed number of bed bays. I could not and did not contribute to conversations regarding ventilation.

237. I was not involved in the pre-handover. Clare Mitchell was the lead nurse and she went round the building doing the snagging from an IPCT perspective. Our Hand Hygiene Coordinator, Stefan Morton gave advice regarding the positioning of gel stations, posters, location of hand towel and soap dispensers. Stefan spent six to eight weeks on this task to ensure that it complied with national hand hygiene policies.

238. I have been asked to explain the difference between ‘snagging’, ‘commissioning’ and ‘validation’ of a new hospital. Snagging is simply a visual assessment of any obvious minor faults. In terms of IPC this could be integrity of flooring, cupboards, anything that would make cleaning difficult to do or where spacing would seem to be less that required to store equipment, linen, sterile stores. Location of gel stations, soap, hand towel dispensers etc. would also be considered. The differences between that and commissioning and validation I would have to defer to the expertise of my colleagues in planning and estates to explain.

239. Many people were involved in this process. Pamela Joannidis reviewed RHC and Clare Mitchell QEUH. Jackie Barmanroy was still on the site at this point and Stefan Morton was also located on site as stated above. The project

team did a mock-up of a room in a building in Hillington to give us a sense of the space. Because the ITU was in fact a derogation there was a requirement that there had to be 3.6m in between the beds in the proposed bays. I recall there was a mock-up of that too.

240. Post-handover and before patients arrived, the team were involved in reviewing the buildings. Professor Williams had done a walk around with Clare Mitchell (LIPCN) and had identified that there were some issues with the walls in the paediatric BMTU unit and asked Mary-Anne Kane to investigate this. Ms Kane then told Professor Williams that the HEPA filters had not be installed. I was cc into an e-mail from Professor Williams to Dr Armstrong regarding this on 5 June 2015 **(A49387376 - Email from C Williams to J Armstrong regarding BMT unit - 5 June 2015 - Bundle 23, page 1112)**. There was a meeting about this issue chaired by the Chief Operating Officer, I recall that this was on the same day Professor Williams had been informed. HEPA filters were obtained and installed and Professor Williams organised air sampling to be done as soon as they were in place.

241. I have been asked whether I informed anyone that the HEPA filters were missing from the BMT rooms in Ward 2A. I forwarded the email I was sent onto Clare Mitchell and Pamela Joannidis for awareness/infomation.

242. My general impression of the new hospital when it opened was a positive one.

Concerns about Wards 2A and 4B once occupied - 2015

243. I was aware that 4B was not a good as it would have been if it has been designed from scratch.

244. In terms of 2A, I was not aware of any major issues with ventilation after the HEPA filters had been installed until 10 August 2015 when I attended a meeting with the Chief Operating Officer. In September Mr. Walsh was on

annual leave as was Professor Williams and Professor Williams had indicated that depending on when results were available one of the ICD in the south would be able to interpret these. The ICDs who were tasked with undertaking this review did not feel they had enough information to do this and had cc in Professor Jones to e mails regarding this.

245. I am aware that Dr Inkster was not in favour of the Positive-Pressure Ventilated Lobby (PPVL) rooms and preferred positive pressured isolation rooms for BMT patients. I believe that when the PPVL rooms were first suggested for the new build that they were recommended by NHS DoH England. I recall having an informal conversation with Professor Williams about this. However, based on Dr Inkster's advice the SMT within the directorate put a business case together to convert some of the rooms to negative pressure isolation rooms and this was successful.

246. I have been asked when I became aware of issues with ventilation. In June 2015 and August 2015.

247. I have been asked what my understanding of the issues was. In June 2015 re the HEPA filters and then in September 2015 regarding the sealing of the rooms.

248. I have been asked questions regarding the following: an ICD resigned in July 2015 over major concerns around the specialised ventilation areas. Then the Lead ICD tendered their resignation over safety concerns regarding water and ventilation in September 2019 but remained in post:

a) I have been asked what my response was to these resignations. In 2015 this would have been a matter for Prof. Williams and Mr Walsh so no response would have been required by me.

b) In 2019 I was the acting ICM and had tried as much as possible to support Dr Inkster's position and support the IMT process but it was becoming increasingly apparent that there were concerns being raised as to the effectiveness of the IMT process.

c) I have been asked what steps I took to understand the ICD's concerns and what actions, if any, were taken. Although I was the acting ICM Dr Inkster's resignation letter was never sent to me. Dr Inkster sent this directly to Dr Armstrong.

249. I have been asked questions regarding the following**:** on 10 September 2015, I received an email from Dr Inkster saying that she and two other colleagues were of the view that Ward 2A was not safe for transplant procedures **(A48652585 – Email T Inkster to S McNamee et al – Sealing of suites within RHC Ward 2A – 10 September 2015 – Bundle 27, Volume 4, page 329)**: -

a) I have been asked in what capacity did I receive the email. Mr Walsh was on annual leave so I was acting up for him.

b) I have been asked how I responded to the email. I don't recall exactly but I imagine I would have flagged to Jamie Redfern. I know there was a meeting on the 11 of September to discuss the contents of the email.

c) I have been asked what my view on the safety was or otherwise of the ward. As an ICN I am not competent to give a view on ventilation.

250. I have been asked if I recollect attending a meeting on 11 September 2015, along with Jamie Redfern and Alan Mathers where Dr Inkster reiterated her opinion that the unit was not safe. I don't recall attending this and have checked the emails in relation to this and I was not cc into the discussion re the summary of the meeting.

a) I have been asked what the outcome of the meeting was. Dr Inkster responded to Dr Mathers saying that in her opinion the unit was not microbiologically safe.

b) I have been asked whether any actions were taken. I don't recall. I would have handed this over to both Mr. Walsh and Professor Williams on their return from leave.

Concerns about Ward 4B and decant to Beatson in July 2015

251. My understanding is that Ward 4B (Adult BMT) was retrospectively put into QEUH because of issues with JACIE accreditation.

252. My recollection is that issues were identified with the compliance with the agreed specification of the adult BMT. Professor Williams initially led on the rectifications from an IPC perspective then Dr Inkster did.

253. I have been asked what my understanding was of the issues in Ward 4B was. There were a number of issues both in relation to ventilation but also things like sealing the rooms and HEPA filtration.

254. I have been asked when and how did I first learn of the issues. I was on annual leave for a period in June 15 so would not have been aware of them at the time others would have been. Pamela Joannidis as my deputy was cc into correspondence around this. Pamela did a briefing for me on this issue on 5 July 2015 on my return from annual leave.

255. I have been asked what steps I took to understand the issues and what actions were taken. I would have supported the process and directed members of the nursing team to assist if required, but with regards to ventilation, the IPCNs (including myself) would not have been able to advise on ventilation.

256. I have been asked what I understood was happening with the issue/event. That there were plans in place to rectify the issues raised and that the ICDs were assisting with the help of Dr Hood.

257. I have been asked whether the concerns were something I would expect to find in a new hospital. Retrofitting a specialist unit into the middle of a hospital would not be something you would chose to do, ideally, these units should be part of the initial design process as was done when the West of Scotland Cancer Centre was built.

258. I am aware that there was a clear governance and decision making process around the repatriation of patients back into 4B with input at every stage with national experts. I participated with Dr Inkster, Mr. Walsh and Professor Jones in an options appraisal process which described relative risks. Clinicians from BMT also participated in this process as did National Services Scotland, HPS and HFS.

259. There was an issue regarding the fact that the corridor could not be fully HEPA filtered if the unit was to stay in 4B. Dr Inkster was not happy about this derogation but my understanding is that advice from HFS/HPS and Public Health England was that this was not essential.

260. Around September 2015 I was forwarding emails to Anne Lang (Mr. Walsh Personal Assistant) about the issue with the adult BMT room and the move back to the Beatson.

261. I have been asked in what capacity did I receive the emails. Copied in for information.

General Issues at the time of QEUH opening – 2015

262. Issues with the build were emerging for example, cladding and glass panels failing. People were also complaining about the smell from the sewage

works, but smells from these types of facilities in themselves do not cause infection. I recall Dr Inkster was involved in assessing the cladding issue.

263. I was not aware of other issues that had been raised, e.g. the room temperatures or faulty TVs. We had recommended the use of interstitial blinds because they don't require cleaning, however, the mechanisms did not always work.

Issues impacting QEUH/RHC – 2015 onwards

Infections and Reporting

264. The National Manual was updated at the end of June beginning of July 2017 and we updated our systems in response to this update in July 2017. Four new environmental organisms were added to the list of organisms which required mandatory surveillance, however, we had already added two previously. The four were as follows: Serratia marcescens, Acinetobacter bumannii, Pseudomonas aeroginosa and Stenotrophomonas maltophilia. Acinetobacter bumannii & Stenotrophomonas maltophilia were new alerts for the team. They may have been occurring beforehand but we would not have had active ongoing surveillance of them. Almost immediately we were starting to receive triggers. Every patient that had any of these organisms isolated in the laboratory would have resulted in a referral to the team to review however a trigger is supposed to be an exception. There was no accompanying guidance, there is still no guidance available regarding surveillance of these organisms today; it is currently being tested nationally. It was difficult to tell what was a normal background and what was not. It was challenging to interpret especially in the specialist units like the Paediatric Intensive Care Unit (PICU), where there were a lots of chronically sick children on multiple antibiotics who were chronically colonised with these types of organisms. Antibiotics can alter what is considered to be the normal gut microbiome.

265. Normally we would have considered SPCs for this type of surveillance, however Dr Inkster had reviewed the literature and had suggested some triggers based on numbers over a period of time rather than SPCs. They were put in place and reported to ARHAI as they were occurring, they would also trigger a PAG/IMT.

266. There were a number of environmental organism PAG/IMTs throughout RHC & NICU during this time. Although there were more PAG/IMT that I had anticipated they were being managed in the established system. On 7 August 2017 we reported three green HIIATs across NICU/PICU. PICU was an increase in Pseudomonas, NICU it was Stenotrophomonas and S. capitis (S. capitis was added to our alert lists early in 2017 so was also a 'new' alert). We were also reporting a HIIORT to ARHAI with regards to two cases of Stenotrophomonas in 2a.

267. Irrespective of my thoughts regarding the sensitivity of these triggers the criteria for these, proposed by Dr Inkster, continued to be acted upon. On her return in 2018 I asked her about this and she responded to me in an e-mail on the 26 March 2018. **(A49645974 – Email Chain including email from T.Inkster to S.Devine - re Triggers – dated 26 March 2018 – Bundle 27, Volume 4, page 322)**

268. I have been asked if we had four triggers in one week. We had three with a green HIIAT and one ongoing RED HIIORT 7 August 2017.

269. I have been asked what I said was not a trigger, to Susan Dodd. I commented that triggers are normally exceptions. I did suggest that they may be too sensitive but as Dr Inkster was off they were left as she had suggested until I could discuss this with her when she returned.

270. I have been asked if it was not a trigger, why was it managed as a trigger? We continued to use the suggested triggers so we managed triggers within the existing process.

271. I have been asked what that management involved. PAG/IMT

272. Susan Dodd had produced a report summarising the incidents that had occurred. These had been reported in the sector updates which is presented to each meeting of AICC. When typing was undertaken many of the cases were being reported as unique, i.e. that the same organism had never been isolated from patients in the hospital before. This indicated to me that it might be originating from the patient's own flora and not due to not cross-transmission or a specific source. I didn't get a sense of it being an issue with a single source, but it was a complicated picture.

CLABSI Line Surveillance – 2017

273. In 2017 there was a perception that there was an increase in Central Line Associated Bloodstream Infections (CLABSIs). The Chief Nurse for paediatric services, Ms Jennifer Rodgers reached out to other centres to look for benchmarks, ultimately I believe they benchmarked their rate against that of the children's hospital in Cincinnati which I understand was considered to be world leading. Ms Rogers set up a Quality Improvement Group to review data and processes around the insertion, maintenance and management of these lines. Line surveillance can be complicated and resource intensive. Many of the children had their lines in for months and had complicated underlying conditions and risk factors that could influence the rate of CLABSI.

274. Dr Peters was keen that we should be more proactive in undertaking line surveillance. Approximately 30% of people in hospital have some kind of invasive device in situ on any given day. We were already collecting data on ECB and SAB infections so we did have a baseline in terms of numbers of these specific type bloodstream infections but this was not line surveillance. For many years we have had board wide SAB group looking at strategies across the piece, so we were actively trying to reduce blood stream infections in all patients but line surveillance was very difficult to undertake in

a meaningful way however we were aware of the work Ms Rodgers was undertaking in RHC as some of the team contributed to it.

Serratia in NICU – 2015 and Pseudomonas in NICU – November and December 2015

275. We had an outbreak of Serratia marcescens in 2015 within the Neonatal Intensive Care Unit (NICU) in the maternity block which is part of the retained estate. At the time Serratia marcescens was not in the manual. Thereafter we included this organism in our mandatory alerts. Water testing was carried out at the request of Professor Williams and returned negative results. The outbreak was reported by ARHAI to the Scottish Government. Serratia marcescens was one of the four organisms included in the update to the manual.

276. I have been asked what the impact of the outbreaks were on patients; when and how did I first learn of the issue/event; what steps did I take to understand the event and what actions were taken; what were the hypotheses around the issue; what did I understand was happening with the issue/event; what steps did I take or order to have taken and why; and did these steps achieve what I hoped they would. The IMT process is a multidisciplinary process and is recorded in the minutes and associated papers. A summary of the impact on patients, the date the IMT occurred, the situation update, proposed hypotheses actions to be undertaken and eventual outcome are all included in these. These are all agreed by the team managing the incident so I would respectfully ask you to consider these which have been submitted in relation to this and other sets of similar questions. My understanding of matters would be consistent with what was noted in the IMT minutes. Lessons learned are included in the hot debrief, the generation of which is determined by the chair of the IMT.

Discussion around tap flow straighteners – February 2016

277. I have been asked about the following**:** at a Board Water Safety Meeting on 2 February 2016, discussion took place around the Pseudomonas risk assessment and the tap flow straighteners, and how to mitigate the **(A38675833 - Minutes — NHSGGC Board Water Safety Group Meeting - 2 February 2016 – Bundle 11, page 55)**

a) Was I aware of the risk of Pseudomonas in the taps and the discussions around the requirement to mitigate the risk? No one from IPCT attended the meeting led by HFS on the 5 June 2014 however I have seen the minutes and refer to the following:

"it was unanimously agreed that as the taps installed within the new build development had complied with guidance current at the time of its specification and briefing and that the hospital was in the process of being commissioned, it should be regarded as being in the "retrospective" category, not "new build". There was no need to apply additional flow control facilities or remove flow straighteners and any residual perceived or potential risks would form part of the routine management process."

I was aware of the outbreak in NICU in Northern Ireland and the guidance issued by HPS in response to this, e.g. the requirement for a board water safety group, water checklist if a case occurred.

b) Was I involved in taking any steps to mitigate the risks? Many members of the IPCT, including myself, have updated the GGC Pseudomonas risk assessment over a number of years. The controls are listed in these documents.

c) What steps did you take or instruct to be taken? The details of the controls are documented in the risk assessments submitted.

Increasing number of unusual bacteraemias – July 2016 to February 2017

278. I have been asked about the Oversight Board Timeline, from which the Inquiry understands there was a gradual increase in bacteraemia rates amongst paediatric haematology patients between July 2016 and February 2017 **(A33448013 – Oversight Board Timeline - Timeline of Incidents for the period 2015 to 2019 - Bundle 6, page 922)**

a) Was I aware of the increase? March 2017 I was made aware of an increase – PAG document 3 March 2017

b) What steps did I take to understand the issue and what actions were taken, if any? My understanding at the time that there was a group led by the paediatric service that was undertaking a review of line care.

QI CLABSI Group

Group has 4 work streams;

i. Theatre (insertion + subsequent visits)
ii. Access and line maintenance
iii. Patient and family engagement
iv. Staff education and training

c) What were the hypotheses around the issue? None officially proposed by PAG but issues regarding line care must have been considered in the context of the actions taken.

d) What did I understand was happening with the issue? General concern regarding an increase in line associated bacteraemias.

e) What steps did I take or order to have taken and why? I would have had oversight of the actions suggested by the PAG with updates from the Lead IPCN for paediatrics Susan Dodd if appropriate. Full document is titled October 2017: Ward 2A – IPC Interventions and

Improvement works in response to a number of incidents and outbreaks spanning 7 months including high bacteraemia rates. **(A49645981 – Interventions and Improvement Works 2A – October 2017 – Bundle 27, Volume 4, Page 316); (A49645993 – Infection Control Input Ward 2A – March 2017 – Bundle 27, Volume 4, page 314)**

Elizabethkingia – September 2016 and March 2017

279. Three cases of blood stream infection. Environmental testing undertaken as directed by Dr Inkster. Water and ventilation and chilled beam samples were all reported as negative. All three strains were reported as unique by the National Reference Laboratory.

Stenotrophomonas - July and August 2017

280. There were 2 patients with Stenotrophomonas maltophilia bacteraemias in an 8 day period reported. The hypothesis was not considered by the PAG. Based on the controls it would appear that direct or indirect transmission by either patients, staff or equipment was considered the likely route. To further support this the incident was stepped down when the typing confirmed that these two cases were not related to each other.

281. I don't remember any suggestion that there were issues with the water supply in July and August 2017. I know now that the water was tested and was found to be negative.

282. I have been asked what were the hypotheses around the issue. Hypothesis was not considered by the PAG.

Mycobacterium abscessus in Cystic Fibrosis patients and Mycobacterium chelonae from shower heads – July to October 2017

283. Dr Peters reported to us that there had been an increase in cases of an organism called Mycobacteria abscessus in the Cystic Fibrosis patient cohort.

284. There was a large IMT meeting held on the 20 July 2017 with representatives from HPS and the Director of the National Mycology Reference laboratory in Edinburgh **(A36591622 - 20.07.2017 IMT minutes Mycobacterium abscessus in CF - Bundle 1, page 43)**. It was chaired by Professor Jones. As a result of this IMT HPS commissioned a short life working group to explore CF policies for Scotland with Dr Peters as chair but this was ultimately stood down as the consensus was that specific national policies for this cohort of patients was not required.

Aspergillus in Ward 2A – 2017

285. There was an IMT held on 7 March 2017 initially to explore the possibility of an increase in fungal infections in 2a but moved to focus on two cases of possible aspergillus **(A37989174 - 07.03.2017 IMT minutes Ward 2A Aspergillus - Bundle 1, page 35)**. I was not present at this meeting.

286. I have been asked when and how did I first learn of the issue, What was the issue; was Aspergillus prevalent in Ward 2A over an extended period; what steps did I take to understand the event and what actions were taken; what were the hypotheses around the issue; what did I understand was happening with the issue/event; what steps did the IMT order to have taken and why; and did these steps achieve what I hoped they would? The IMT process is a multidisciplinary process and is recorded in the minutes and associated papers. A summary of the impact on patients, the date the IMT occurred, the situation update, proposed hypotheses actions to be undertaken and eventual outcome are all included in these. These are all agreed by the

team managing the incident so I would respectfully ask you to consider these which have been submitted in relation to this and other sets of similar questions. My understanding of matters would be consistent with what was noted in the IMT minutes. Lessons learned are included in the hot debrief, the generation of which is determined by the chair of the IMT.

287. I have been asked if Aspergillus continue to pose a risk after 2017 and if this something I would expect to find in a new hospital. Aspergillus is ubiquitous in the environment. Ventilation will filter some spores but could never eliminate all as long as people come in and out of environments.

288. I have been asked what action has been taken to mitigate the risks and has that been effective? This would more properly be answered by a microbiologist. Simplistically, ventilation controls and prophylaxis will mitigate the risk but will not eliminate it.

Acinetobacter baumanii – October to November 2017

289. I have been referred to the Oversight Board Timeline p12, which states that Acinetobacter baumanii was found in various locations, including Ward 1D (PICU) in November 2017. I have been asked if I was aware of the issue; what were the hypotheses around the issue; what steps did I take or order to have taken and why; and did these steps achieve what I hoped they would? The IMT process is a multidisciplinary process and is recorded in the minutes and associated papers. A summary of the impact on patients, the date the IMT occurred, the situation update, proposed hypotheses actions to be undertaken and eventual outcome are all included in these. These are all agreed by the team managing the incident so I would respectfully ask you to consider these which have been submitted in relation to this and other sets of questions. My understanding of matters would be consistent with what was noted in the IMT minutes. Lessons learned are included in the hot debrief, the generation of which is determined by the chair of the IMT.

290. The increase in gram-negative infections continued throughout 2018 and 2019. We put every possible mitigation in place to try to address this. There were a number of hypotheses proposed almost all related to water system in some way.

291. I have been asked whether the various events referred to in 2017 indicate that the situation began in 2017. It's clear that there was an issue with bacteraemias in 2017 but the environmental testing that had been done, water, chilled beams, ventilation grills had not identified any environmental source. Between March 2017 November 2017 151 water samples had been taken in 2A, all were negative.

292. I have been asked whether Gram-negative bacteria continued to be an issue into 2020.You will always have some gram-negative bacteraemias associated with this cohort of patients. ARHAI issued GGC with a proposed methodology to monitor this in 2019. This was not issued to any other board in NHS Scotland so comparison is somewhat limited. There is an ongoing debate among the IPC community about the clinical basis for adding different types of organisms in together. Using the ARHAI methodology there was no point during 2020 when the number of bacteraemias reached with the upper warning limit or the upper control limit.

293. I have been asked when and how did I first understand there was a Gram-negative issue. It was difficult to determine was there an issue or was this as a result of the additional organisms included in the manual update. I would have been aware of the hypothesis that it was linked to water in early 2018 when the first PAG was held.

294. I have been asked what steps I took to understand the issue and what actions were taken. The IMT process is a multidisciplinary process and is recorded in the minutes and associated papers. A summary of the impact on patients, the date the IMT occurred, the situation update, proposed hypotheses actions to be undertaken and eventual outcome are all included

in these. These are all agreed by the team managing the incident so I would respectfully ask you to consider these which have been submitted. My understanding of matters would be consistent with what was noted in the IMT minutes.

295. I have been asked what the hypotheses were around the issue. This is a very short summary and by no means inclusive.

a) Water contaminated possibly in tanks possibly in taps.
b) Contaminated pipework prior to the hospital opening.
c) Outlets could be contaminated from backflow from drains
d) hypothesis was that patient had been exposed to unfiltered water source somewhere on site or outwith healthcare setting
e) Biofilm creep from staff washing hands in CWHB.
f) Patient washing their hands and touching their lines afterwards.
g) Filters fitted were now too close to the drains meaning that flow of water was closer thus aeroionisation the organisms coming from the drains was occurring.
h) Lack of ventilation which meant that these aerosols were not being filtered.
i) Dripping chilled beams.

296. I have been asked what I understood was happening with the issue. IMT suggested controls and tried to analyse available information.

297. I have been asked what specific steps I took or ordered to have taken and why. Actions agreed with the IMT. I directed ICN resource as required.

298. I have been asked whether these steps achieved what I hoped they would. Please refer to information submitted re process and outcomes.

299. We were into completely different territory in terms of surveillance, it would not have been normal practice to put different types of organisms together. We were however asking for advice from colleagues in ARHAI, external

experts, DOH England. Partners were involved in this process from beginning to end

300. We also contacted other centres in the hope of obtaining some baseline data, e.g. Great Ormond Street, Leeds etc., however for understandable reasons I think they were reluctant to or could not share. I think we all acknowledged that finding comparator data would be difficult as the units do not function in a standard way.

AICC - Infection Control Issues Meeting - October 2017

301. At the start of October 2017, we had a meeting which resulted in a 27-point Action Plan. **(A36591681 – Infection Control issues meeting minute – 4 October 2017 – Bundle 27, Volume 4, page 331)** The microbiologists raised several points. Some of them I felt were relevant.

302. There was discussion at the meeting about the late inclusion of the Infectious Disease Service to QEUH, and we confirmed that we were waiting for information from HPS regarding the use of the designated isolation rooms for patients with high consequence respiratory infections, e.g. multidrug resistant TB. HPS/HFS had been approached on advice on a number of issues.

303. There were issues raised with cleaning, but we were able to provide detail with regards to this.

304. There was a general concern from the microbiologists that the water had not been tested for Pseudomonas. Iain Powrie (Depute General Manager, Estates) said the water testing was being carried out. I would not have received or had access to water testing data.

The 27-Point Action Plan – 2017

305. An SBAR was written with an action plan **(A38759270 – Action Plan arising in response to SBAR – 3 October 2017 – page 11 – Bundle 27, Volume 4, page 338).** The action plan was to provide assurance that we had heard the concerns and were addressing them. I would refer you to the action plan to detail the issues raised and actions taken to rectify this. The action plan was taken to several clinical governance groups over several years.

306. I was confident that everything raised was taken seriously. Every time the action plan was tabled, it was updated based on what we were doing.

307. When the Healthcare Environment Inspectorate came in January 2019, they asked about the negative pressure rooms in ITU and it was not until June 2019 that I could actually say that this action was complete. The only thing in the action plan that was not completed was the dedicated decontamination room that was the only action that was not technically feasible.

308. The water IMT was complex and emerging. Water expertise is the remit of the ICD/microbiologist so as ICN I was reliant on information regarding the significance of the findings both in the patients and the water sampling. In a situation like this which was novel I would have expected several hypotheses to be proposed. Water sampling was also increased exponentially and I felt there was a lack of context. I was also aware that when we had sampled water previously nothing had been found (apart from the patient case associated with the aseptic unit). It seemed to focus quite quickly on the water/outlets. I freely acknowledge that I found myself in an unusual position in that I did not know very much about water microbiology. Testing hypotheses is a normal process to confirm or exclude hypotheses. Results from typing of samples from the children were not matching what was being found in the water. Normally that may give the members of the IMT pause for thought but the response to this situation by LICD was that absence of evidence is not evidence of absence. I did consider that my lack of experience in this type of incident and knowledge re water microbiology was a disadvantage and during 2018 I did accept that we may have had an issue

with the water. This hypothesis I believe was also fully supported by colleagues in HFS/HPS who were national experts. I have now had sight of both internally and externally commission reports that supports the alternative position, i.e. that most of these infections were most likely endogenous as a result of risk factors present in this complex group of patients and that spread between patients is generally by direct or indirect transfer from one colonised individual to another.

309. Again and with due regard to the fact that I am writing this retrospectively ICNs spend a great deal of their time supporting actions that prevent transmission from a source to a vulnerable patient, e.g. ensuring equipment and the environment is clean, the use of hand hygiene, personal protective equipment etc. The proposal seemed to be that the contamination was so great that these normal controls would not be effective.

310. The water hypotheses was the main focus of actions taken. I understand completely the need to do something quickly and quite often we will recommend a number of actions and never know which one has been effective.

311. I understood that Dr Inkster considered that there was an issue with the taps. I had contributed to a pseudomonas risk assessment and I understood from the meeting in October 2017 that the report from estates colleagues at that meeting was that the temperature mixing valves (TMV) were maintained in all high risk areas and that water sampling was being carried out with exceptions being escalated to the IPCT. I don't think that Dr Inkster was aware of the agreement reached regarding the taps in 2014 so I shared the information I had with her on the 13 March 2018 by e mail and she responded "So basically HPS and HFS supported leaving these taps in. Have to say I disagree with them. "

Water issues before 2018

312. I was aware a meeting was held with HPS and HFS due to an issue in 2014 with the taps. I was not at this meeting. I first became aware of potential issues with the water supply in March 2018.

313. There was water sampling carried out during the Serratia outbreak in 2015 and when we had three cases of Elizabethkingia miricola in blood cultures in March 2017. The tests were negative. ICDs were requesting water testing in 2016/2017 but I would not say that this was a common occurrence. I believe I knew about the aseptic unit and that water sampling in that area was routine as they produced IV infusions for patients and it was part of their standard operating procedures.

Water issues from 2018

314. In February 2018 Dr Inkster arranged a PAG after a confirmed case of cupriavidus. Initially thought to be linked as the case before to the aseptic pharmacy. After a review of the cases a decision was made to sample the water in the aseptic unit and ward 2A. This progressed to an IMT on 2 March 2018. The IMT from 2 March 2018 reported that “In February 2016 routine water testing of the aseptic pharmacy had revealed the presence of this organism. One patient at the time who had received TPN from the unit had Cupriavidus in a blood culture – typing revealed patient and water strains to be the source. Therefore the initial investigation of the Jan 2018 case focused on the aseptic unit but the water supply on this occasion tested negative. Outlets on 2A were sampled and tested positive.

Water Incident Management Team - March 2018

315. As a result of this of the Water Incident IMT in March 2018, a subgroup was formed to action the recommendation ‘water technical group’. I was not a member of this group but I am aware that both HPS/HFS were.

316. There was the Water Technical Group and the Water Safety Group; I sat on the latter but not the former although several members of the IPCT attended the latter too, i.e. Pamela Joannidis, Professor Williams, Dr Inkster and Tom Walsh. The Water Safety Group was set up in 2012 after the Pseudomonas outbreak in Northern Ireland.

317. There were parts of water control that ICNs could support for example, reminding staff to run showers or report any infrequently used outlets. The environmental audit would have picked up if IV drugs were being reconstituted next to sinks, we would remind staff not to use hand hygiene sinks for anything other than hand hygiene etc. ICNs role was confined to this type of advice.

318. The National Support Framework (previously the CNO algorithm) is a structure that sets out the roles and responsibilities of organisations in the event that a healthcare infection outbreak/incident, data exceedance or Healthcare Environment Inspectorate (HEI) report deems additional support to an NHS Board is required. This was invoked on the 22/3/2022. The framework essentially means that HPS/ARHAI have oversight of the process and are the direct link in terms of updates and progress to Scottish Government. I am not sure what the rationale was for invoking this framework.

319. Control measures were in place, a number of them were quite complicated and included whole ward dosing with silver hydrogen peroxide, procurement of and installation of portable hand hygiene stations, pause in using showers, thermal disinfection of the system, replacement of flow straighteners and the significant increase in water sampling. This was quite unusual in an IMT.

320. I had never been involved in an IMT where so much communication went out to patients and relatives. Jennifer Rodgers and Jamie Redfern went round the ward every time we had an IMT and spoke to parents and patients; this was also not a normal process. I felt they could not have done any more in

terms of communications. Most of the communications came from Jamie Redfern, Jennifer Rodgers, and occasionally Dr Inkster. The clinicians would also be communicating constantly with patients and parents. Jennifer Rodgers and Jamie Redfern were also briefing staff.

321. The IMT was concluded at the end of March, I think everyone's expectation was that the controls were in place (specifically the filters on the outlets) and that everything was resolved in the short term.

322. Concerns were flagged by the local IPCT and a PAG was held to review cases on 18 May 2018. As a result of this an IMT was held on 4 June 2018. As the filters were in place the updated hypothesis was that it was the drains that were causing these issues.

323. In regard to HPS involvement in the IMT. The CNO framework had been invoked so I was not absolutely clear if this was still in place. HPS were in attendance from the outset. When PICU was placed on the Framework in 2020 on instruction from SG we were required to complete an action plan and submit this to HPS for approval. I don't believe that this was required after the IMT in March. Please refer to paragraph 112.

324. When the Framework was invoked in relation to PICU in February 2020, we had an improvement plan to complete as part of the process. Once we had completed the improvement plan, we sent it back to ARHAI. They said they were content with it. I had it issued to all the IPC governance groups for awareness/assurance.

325. I have been asked why the algorithm was invoked in 2020. It was not explicitly stated by ARHAI but I believe this was in response to an increase in gram negative infections in PICU and media scrutiny.

326. I have been asked what the improvement plan was. It was a template document listing actions to be taken to assure ARHAI/SG that the actions agreed had been completed.

Response to Water Issues – 2018 onwards

327. One of the control measures suggested was Hydrogen Peroxide Vapour (HPV) cleaning. I also organised peer audits to help support the LIPCN. I hoped that any additional issues that we may not have addressed could be picked up by another ICN with different clinical experiences.

328. Decisions to close rooms for HPV cleaning were made by the IMT. This was operationally difficult in that rooms had to be vacated and the ventilation sealed. The rooms also had to be cleaned after this process. HPV is not fully endorsed nationally but has been suggested as an addition to traditional cleaning methods and is used currently in GGC is specific circumstances and areas, e.g. NICU.

The effectiveness of the IMT from March 2018 until decant June 2018

329. It is extremely difficult to comment on this retrospectively. I felt the IMT at the beginning of 2018 was an effective process, although retrospectively I now think that we could have perhaps tested several hypothesis more rigorously. The patients in this area are very vulnerable and blood stream infections can have such serious consequences, I completely understand the anxiety felt by all and the urgency to stop any further cases. The hot debrief when circulated could not definitively find a link between the cases and the water and I was very thoughtful about this but by then we had moved on to a different hypothesis.

330. Retrospectively I think it would have been helpful if we had almost re-set the IMT with all possible hypothesis on the table. As everyone accepted that there seemed to be a problem with the water the leap to issues with the drains was I think understandable. As far as I am aware we had never put

filters on outlets before and they were bulky so the hypothesis was conceivable.

331. ICNs for many years have audited clinical areas and advised staff not to, for example, make up fluids or drugs next to sinks and when designing new builds sinks are located away from areas designated to perform this type of task. Another example is not to discard waste water or anything else down hand hygiene sinks but we have been advocating this for many years. Then there are actions to prevent transmission for the source to the patient so for example, hand hygiene, personal protective equipment, environmental hygiene, aseptic techniques.

332. In terms of the control measures in place, we got to the stage where the decision was to decant. This was due to rising anxiety with the clinical teams and the general lack of confidence in the ward environment.

333. I think the refurbished ward is a world class facility. Water is monitored closely. A clinical review is undertaken on any patient with a positive gram-negative bacteraemia, the review includes patient's journey, any positive water samples and the patient's individual risk factors. The end of the document is a summary of the team's conclusions as to the possible source of the infection.

334. During 2020 the infection rate using the ARHAI methodology never breached the upper warning or upper control limit. In general, the same controls were in place as in 2018. I continue to be thoughtful as to why this group of patients seemed to be affected when there were other vulnerable groups exposed to the same risk were not. I have now had sight of both internal and external reports which supports the alternative position, i.e. that most of these infections were most likely endogenous as a result of risk factors present in this complex group of patients and that spread between patients is generally by direct or indirect transfer from one colonised individual to another.

335. Between June 2018 to September 2018 we diverted staff as required to support the actions from the IMT. I was in the fortunate position of having very experienced senior ICN including a Nurse Consultant that could be diverted if necessary.

Other Water Issues

336. Flooding in en-suite bathrooms was flagged by the leads. SCRIBES would have been required in order for repairs to go ahead. This is an additional workload for the teams.

337. In October 2021 leaks from hot water valves/pipes occurred in 3 stacks of the QEUH affecting multiple clinical areas. At the time of this incident estates colleagues confirmed that they were not linked.

Ventilation

338. At the October 2017 meeting, there was discussion about our waiting for information from HPS. We had gone to HPS previously for advice in relation to the BMT. There were issues raised about the suitability of the ITU PPVL rooms in critical care and whether or not these would be suitable for cases of multi-resistant tuberculosis. IPCT flagged that these rooms were not negatively pressured isolation rooms to the sector senior management team in August 2014. In the BICC minutes from 26 January 2015 it states "Professor Williams reported that in relation to the MDRTB Regulations the rooms in IDU are compliant" **(A32221927 - Minutes - BICC Meeting - 26 January 2015 - Bundle 13, page 229)**. I recall that Prof. Williams had contacted someone is estates possibly the project management team regarding this but I can't recall any additional detail. In the documents in relation to the meeting on the 4 October 2017 it states that "short term patient pathway has been agreed by the ID clinicians whereby patient will be routed either to GRI or Lanarkshire." This issue was part of the 27 point

action plan and ultimately 7 rooms across QEUH/RHC were converted to negative pressure isolation rooms **(A36591681 - Infection Control Issues meeting minute - 4 October 2017 – Bundle 27, Volume 4, page 331)**.

339. I have been asked which wards the PPVL rooms were. In this context I am referring to the PPVL rooms In Medical HDU which were allocated to the Infectious Disease Service.

340. I have been asked who Prof. Williams went to for guidance. The Project team – but I can't recall exactly.

341. I have been asked if Prof. Williams asked the person to find out if the rooms met guidance or to get an answer from that person. Yes and answer was positive and was reported at BICC on 26 January 2015.

342. I am not competent to comment in any detail on the technical aspects of ventilation. I cannot comment on concerns regarding the risk of infection for ventilation.

343. I know we need special ventilation for certain patients, e.g BMT and I'm aware that there is no guidance in this area. I am aware of other facts from attending meetings, e.g. that all of QEUH is filtered to some extent but I don't feel able to competently comment on much more in this area. I can follow conversations on this topic but would not in any circumstances give advice on this topic.

Decant from Ward 2A and 2B to Ward 6A and 4B - 2018

344. The decision was made to decant Ward 2A and to move to Wards 6A and 4B. The IMTs in 2018 cover the sequence of events that led to that decision. The first mention of the decant was on 10 September 2018 **(A36629302 - Water Incident IMT minute – 10.09.18 – Bundle 1, page 154)**. There were references in the previous minutes about HPS asking us what our

contingency plan was. I imagine it was probably in people's mind even early on. Once the decision had been made the operational team took over the planning of this.

345. I believe the rationale for closing Wards 2A and 2B was to conduct a full assessment of the environment and to plan any remedial works required. The clinicians at this point had no confidence in the environment in which they were working and were voicing these concerns to the Service Director Kevin Hill.

346. I had no input into selecting ward 6A; 4B was the only option in terms of BMT patients. Susan Dodd LNIPC would have reviewed 6A once it had been chosen and flagged any remedial work necessary. Susan Dodd was the Lead Infection Prevention and Control Nurse for Paediatrics.

347. I recall the Chief Operating Officer (COO) attending the meeting on the 18th of September of 2018. I do not recollect if there was a formal sign off but this was a recommendation of the IMT. I recall there were a number of options tabled and a paper written to review these.

348. I did not have any concerns regarding the decant to Wards 6A and 4B from an IPC perspective as the facility was generally like for like but I know operational and clinical teams had concerns which were being mitigated, e.g. out of hours medical cover etc. BMT children were in rooms in 2A similar in specification to those in the adult BMT.

349. In terms of the physical decant, from an IC perspective, Susan Dodd and Dr Inkster reviewed the area and flagged any concerns. Estates and Facilities were responsive the whole way through. Whatever we asked for they were good at putting in place.

350. I was not involved in the planning of the decant or patient pathways in relation to where patients were going. No concerns were raised by Susan Dodd or Teresa Inkster after the work was completed.

351. Regarding communication in relation to the closure of Ward 2A between staff, patients, and families, my impression was that the service leads were communicating continuously.

352. I have never known a service to be so focused on active communication as the Women and Children's SMT were during the entire period.

My role in IMTs 2018 to early 2019

353. From 2018 to early 2019, my main job in IMTs was to ensure that the local team was supported, I would draft reports or briefing papers and divert IPC resources from other areas as required. We were being asked questions from SG via HPS and I would have led on the collation and drafting of responses. I would have written up the summary of the incident in the Healthcare Associated Infection Reporting Template. The Lead Nurse and ICD would, in most cases complete the Healthcare Infection Outbreak Reporting Template. It came to me so that I could send it. I would have commented on the contents if required.

354. Dr Inkster and I would have been briefing Dr Armstrong after the IMTs. The process was not as formal as for example the weekly report but it would have been done by phone or email.

Cryptococcus Overview - 2018 to 2019

355. The Cryptococcus IMT was in response to a separate incident. **(A36605178 – 20.12.2018 IMT Cryptococcus – Bundle 1, page 245)**

356. I have been asked whether the 20.12 2018 IMT the first Cryptococcus IMT, or the first I attended. It was the first IMT.

357. I have been asked what the issues with Cryptococcus were. Uncommon and there were two cases in a very short period of time.

358. I have been asked when and where did I first become aware of the issues. Not sure. I have reviewed e mails but it's very likely either Ms Dodd or Dr Inkster would have let me know as soon as they were aware.

359. I have been asked what steps I took to understand the issue and what actions were taken. Attended IMT and supported actions and reporting.

360. I have been asked what were the hypotheses around the source of the issue; what did I understand was happening with the issue; what steps did I take or order to have taken and why; did these steps achieve what I hoped they would; and what were the hypotheses around the issue. The IMT process is a multidisciplinary process and is recorded in the minutes and associated papers. A summary of the impact on patients, the date the IMT occurred, the situation update, proposed hypotheses actions to be undertaken and eventual outcome are all included in these. These are all agreed by the team managing the incident so I would respectfully ask you to consider these which have been submitted in relation to this and other sets of similar questions. Lessons learned are included in the hot debrief, the generation of which is determined by the chair of the IMT.

361. I have been asked to what extent were the issues escalated internally. Normal processes as described previously would have been used.

362. I have been asked to what extent were HPS involved. It was reported to HPS as normal.

363. I have been asked whether this was something I would expect to find in a new hospital. I would expect to find this in any hospital.

364. I have been asked whether, knowing what I now know, am I comfortable that I did all that could be done? Yes - within my area of scope. I did everything I

was asked to do by the IMT. I was part of the sub group and know that the most probable explanation was that this was latent infection.

365. We were undertaking enhanced supervision visits at the time. Susan Dodd met with the Lead Nurse, Senior Charge Nurse, and Estates or Facilities Management. They would walk round the ward and identify any issues so that they could be rectified quickly. We are continuing to carry out enhanced supervision in Ward 2B currently but we now call it a multidisciplinary assurance review.

366. I have been asked what enhanced supervision is. It is a multidisciplinary walk around to identify any issues - practice or EFM - in order to rectify them quickly.

367. I have been asked whether that was already in place before Cryptococcus became an issue. Yes.

The Cryptococcus Advisory Group

368. I sat on the Cryptococcus Advisory Group (CAG). My role was as an ICN/senior manager because there may have been IC issues that I could ask the team to take forward and to ensure that there was liaison with drafts of papers or minutes etc. Dr John Hood was the chair of the group. When Ms Dodd obtained a post as Nurse Consultant at ARHAI she also attended this group as did Ms Rankin.

369. I have been asked to expand on the CAG e.g. when was it set up, what was its purpose, and who else sat on it. Please refer to submitted minutes for membership. Its purpose was to explore the hypothesis. The first meeting was on 14 February 2019 **(A39233720 - IMT Expert Advisory Sub-Group Minutes - Cryptococcus - 14 February 2019 – Bundle 9, page 5)**. It was set up on the instruction of Dr Armstrong.

370. I believe Dr Armstrong was aware that Dr Hood had expertise with regards to ventilation and would be an appropriate clinician to chair this group. Dr Hood had been an ICD when the West of Scotland Cancer Centre was being built and had contributed significantly to this particular building especially the BMT unit.

371. I have been asked whether I think I was equipped to participate in the CAG. I'm quite clear about my scope of practice with regards to IPC and contributed where able within this scope.

372. I have been asked what could have been done to equip me to participate. The experts on this group were the microbiologist and the engineers and the NCIPC ARHAI. I was the GGC IPC representative and if I could take any actions I did so, e.g. I liaised with the service regarding the possibility of automatic door opening in the unit; an idea the clinical team subsequently rejected.

373. I am not aware that Dr Inkster was advised not to speak to John about the work of the subgroup. The decision had been made by Dr Anderson, that somebody else took forward that piece of work. The purpose of the group was to explore all the hypotheses. Dr Hood was also semi-retired so had more time to dedicate to this than Dr Inkster.

374. I have been asked if I asked Dr Inkster not to talk to John Hood about the Cryptococcus Incident because she could be viewed as influencing him. It's entirely possible that I would have perhaps remarked to Dr Inkster that she should let the process run its course. I have never told anyone not to speak to a colleague.

375. Dr Hood considered all hypothesis presented. He was in the plant rooms many times and took thousands of air samples. He rigorously tested all hypothesis and included any ideas or actions suggested by the sub group. Estates colleagues organised Computational Fluid Dynamics model analysis of the airflow around the helicopter pad. I was not aware of any issues Dr

Hood had in trying to get information. The meetings finished around 2021, and the report was finalised in 2022.

376. There is more of an IPC presence in 2A than most other areas although this has reduced over time. We provide support and advice. The water testing is extensive and we carry out a case review if there are any positive gram negative blood cultures.

377. I've been asked whether there different considerations in the paediatric patient population which mean they require more resources than adults. Paediatric IPC is complex. Children need to interact with other children. They need toys and to go to school. Lots are doubly incontinent (nappies) lots parents are there all of the time which increases the bioburden in the rooms. As you would expect of young children they are also not great at complying with IPC practices, e.g. hand hygiene, isolation. They often have siblings to provide support. It's not the same as adult IPC and has always been resourced better than some of the adult areas.

The Effectiveness of the Cryptococcus IMT

378. The IMT process in relation to Cryptococcus worked well. It was concluded by Dr Inkster with an email to HPS to close down the IMT after a period of time when there were no additional cases.

379. There were a number of hypotheses proposed during the IMT meetings. Dr Hood extended these to include any that were suggested after the main IMT concluded. Andrew Seaton had raised the issue of latency and dormancy at a meeting, I believe it was at BICC. This had not been considered by the IMT. Dr Seaton was invited onto the group but I recall he felt it was technical rather than clinical and stepped away from it. Dr Andrew Seaton is an Infectious Disease Consultant.

380. There was a good deal of pressure experienced by everyone in the first few months of 2019. We had five serious IMTs. There were requests for

briefings and information and lots of media attention. I recall I was asked to do a time line for Jane Grant who was and is the Board Chief Executive.

Issues in Ward 6A and decant to Clinical Decision Unit - January 2019

381. When issues started to arise on Ward 6A. I was involved in deploying people, to make sure Ms Dodd LIPCN had enough resources to do whatever was asked of her. I had requested that Pamela Joannidis assists Ms Dodd as well.

382. I have been asked what the issues were in Ward 6A. As part of the IMT it was reported that air sampling carried out in the plant room on 21 December had isolated Cryptococcus. Sampling in the ward did identify Cryptococcus but the minute noted that, “TI also stressed that air sampling is taken during a snap shot in time (2 minutes) and therefore cannot 100% reliably provide evidence that growth of particular fungus doesn’t exist. It is reliant on capturing fungal spore bursts at the time of sampling. Heavy fungal overgrowth on plates so not possible to say whether Cryptococcus there or not.”

383. IMT 17 January, “Particle counts were carried out in Ward 6A which came back much higher than expected especially with the hepafilter units turned onto maximum power. “and numerous showers bases that have mould grown on them due to the seals being broken and water leaking.” **(A36690588 - 17.01.2019 IMT Cryptococcus Part 1 AM – Bundle 1, page 266; A36690599 -17.01.2019 IMT Cryptococcus Part 2 PM – Bundle 1 page 270)**

384. I have been asked who the experts were who were guiding the IMT. There were no separate IMTs for water and ventilation I believe I was referring to the experts from 2018 re water (HPS/HFS). In relation to Cryptococcus in the second minute from 17 January 2019 the following was recorded “Dr

Inkster spoke to Peter Hoffman from Public Health England who is ventilation expert and was confident in Dr Inkster Hypothesis."

385. Regarding closure of Ward 6A and decanting to the Clinical Decision Unit (CDU) in January 2019, I was only involved as a member of the IMT **(A36690573 – IMT Cryptococcus – 22.01.2019 – Bundle 1, page 282).** This was a less controversial decant as they were going back into the children's hospital. I do not remember there being a situation where Teresa had to justify the decision to move to CDU at a meeting with Jane Grant in January 2019.

386. I have been asked what it was about the air that worried the IMT. Air sampling had returned high partial counts and fungal spores.

387. I have been asked what the risks were. That patients would acquire fungal infections.

388. I have been asked why the move less controversial. Children would be co-located with essential services, e.g. PICU.

389. I was not involved in assessing the suitability of CDU as a potential place to move the children to but Ms Dodd did. Please refer to the minutes of 22 January 2019.

390. Once the decision was made to move to CDU, A standing agenda item was how the IMT were communicating with parents/patients/staff. Those conversations were operational conversations and so I don't remember anything in particular.

<u>Cryptococcus IMT – January 2019</u>

391. In the IMT minutes for 21st January 2019 **(A36690569 - Cryptococcus IMT minute – 21.01.19 – Bundle 1, page 278)**, there is reference to an

operational group in relation to the decant. I was not part of this and would not expect to be part of it.

392. There was an IMT on 22nd January 2019 **(A36690573 - Cryptococcus IMT minute – 22.01.19 – Bundle 1, page 282)** where under 'Situation Update', Susan Dodd talks about going into the CDU. She finds there are rooms with sealant gaps in the shower rooms that would cause damp and that is going to be fixed, as well as putting filters onto taps.

393. I have been asked whether I have any views about the safety of Ward 6A following those remedial works. I believe it was as safe as a general ward could have been but problems emerge in any environment that require attention and repair.

394. I have been asked what actions were taken as a result of the report. Could I respectfully refer you to the full report. Actions taken are threaded through under the headings in each section titled - Action taken by NHSGGC to mitigate this potential risk:

Cryptococcus IMT – February 2019

395. On 4th February 2019, there was an IMT where there was disagreement, particularly from Professor Brenda Gibson, about the HIIAT score being red. **(A36690558 - Cryptococcus IMT minute – 04.02.19 – Bundle 1, page 303)** The HIIAT score is done at a point in time in order for it to be escalated and de-escalated. On 4 February there were no new patients, and mitigations were in place. The majority of the IMT members felt that the score was amber. Dr Gibson did not agree and this was noted in the minute.

396. I can understand why Dr Gibson felt it should be red as there were clinical concerns about the environment in general. The HIIAT is an assessment based on a point in time but like any generic assessment I has its limitations.

397. It is unusual for there not to be a consensus with regards to the HIIAT assessment. As above her disagreement was noted in the minute. The incident continued to be reported to HPS and SG and it was included in the Healthcare Associated Infection Reporting Template.

398. Before the move to CDU there were issues raised about the accommodation and this was covered in the IMTs. Updates on this situation would have been discussed at the lead nurses meeting to share lessons across the board. If the Lead Nurses were concerned about anything they would let me know. My recollection of Ms Dodd thoughts about CDU was that the unit had been in use for a couple of years by then and there was a bit of wear and tear that required attention. Ms Dodd had reviewed other areas before and had a good liaison with estates and facilities colleagues in order to have issues rectified. I do not ever recall anyone saying to me CDU was not a suitable place.

Health and Safety Investigation

399. I cannot recall being part of the health and safety investigation. If any documents had been requested they would have been sent on.

Cryptococcus IMT – 2 July 2020

400. I have been asked about Cryptococcus at QEUH/RHC in July / August 2020 e.g. what was the issue, when did I become aware, what action was taken, was there communication between me and my colleagues, and if not, what were the issues giving rise to that. I would have been alerted by the local IPCT as soon as they were aware that there was a Cryptococcus antigen screen that was reported as positive. Probably on the 29 June 2020. I attended the meeting called by Dr Alan Mathers on 30 June 2020 regarding the screen result.

401. I have been asked what the hypotheses were:

a) Environmental source – hospital or community

b) False positive

c) Reactivation of previous latent infection

402. I have been asked what my opinion was on the causes. I'm not qualified to comment on this.

403. I am told by the Inquiry that a concern was raised that the IMT minutes may not have been accurate, and asked for my views on that. The minutes are notes of the meeting. They are drafted circulated and amended based on any comments received for those that attended the meeting.

404. I have been asked how satisfied I was with the management of the Cryptococcus incident in 2020 by NHSGCC; what else could have been done; how could matters have been handled differently, and what concerns, if any, did I have about how matters were dealt with. My opinion was that it was managed within a multidisciplinary team of experts with wide range of respected opinions and that the conclusions were proportionate and reasonable based on the scientific evidence.

Prevalence of Cryptococcus cases at QEUH/RHC

405. This is based on information and experiences I have gained as being part of the Cryptococcus sub group. This is not an area that I have expertise in, I am not a microbiologist.

a) I have been asked why I think there were Cryptococcus infections in non-HIV patients at QEUH/RHC between 2015 to date. The literature supports the hypothesis that reactivation of latent infection after exposure to this organism which is ubiquitous can occur. Most of our most vulnerable patients are located on this site which delivers care to over 2000 in-patients.

b) I have been asked for my views about the concerns surrounding the built environment and the Cryptococcus infections at QEUH/RHC. I am aware that there are defects in this building, however, on reflection I do not believe that the building itself poses an increased risk of cryptococcal disease.

Incident Management Team and specific IMTs - 2018 to 2019

IMT– March 2018

406. For the March 2018 IMT, **(A36690544 - IMT minutes Water Incident Ward 2A RHC – 23.03.18 – Bundle 1, page 81)** the key control was the filters, and the Water Technical Groups recommendation regarding chlorination of the water supply.

407. In March 2018, I was involved in most of the IMTs. It was a complicated and a novel situation, and I would have been required to contribute to or draft reports. I would have also been required to liaise with ARHAI and senior members of the boards with regards to this incident.

408. I consider that the March 2018 IMT was a productive IMT with people putting forward their ideas and implementing suggested actions to find a solution. When it ended, there was a hot debrief document prepared by Dr Inkster. I was not involved in the drafting of this. Normally it would be the chair of the IMT who did this. This was not and is not a mandatory requirement but is a point of good practice in terms of lessons to be shared across the board. It was an ARHAI template. This would have been submitted to the AICC and the BICC.

IMT – June to August 2019

409. After the initial IMTs in early 2019, they started again in June 2019 with cases with Gram-negative bacteria in Ward 6A. At this point I was the Infection Control Manager. These issues did not significantly change my role as I would have attended IMTs as the Associate Nurse Director and as Mr. Walsh representative. Although I continued to have overall management of the nursing team this meant that I was more closely aligned to the work of the ICDs and was responsible for the management of the Lead ICD sessions.

410. Part of my role as ICM was to ensure that I supported compliance with local and national policy and guidance in relation to IPC. In terms of the functioning of the IMTs I had never experienced such a complicated, challenging incident. We now have a framework which is based on the guidance from Chapter 3 of the National Infection Prevention and Control Manual and the overarching Greater Glasgow and Clyde Outbreak and Incident Management Plan which has greater detail with regards to managing more complex incidents.

411. When the IMTs relating to Gram-negative bacteraemia started again in June 2019, there was senior board representation at the IMTs and both myself as ICM and Dr Inkster would have been in close contact with Dr Armstrong re updates.

412. A recommendation was made by the IMT to restrict admissions to Ward 6A. This decision would have been escalated to the Board as this unit provided both regional and national services so the impact would have been felt across Scotland but I consider that the senior members of the board were well aware and were closely monitoring the situation as it was an extremely serious situation.

413. During this entire period there were a lot of actions put in place to mitigate risk and lots of work to understand what the data was telling us and different hypothesis were also proposed. This led to minor disagreements. It got to the stage where it felt as if for every hypothesis controls to mitigate had been put in place but then something else would emerge. The assumption that

the hospital was the only source made me very thoughtful as these patients were in and out of hospital and some were at School etc.

414. It was a fast moving IMT but information was being presented to the IMT which I felt we were not given the time to fully consider. It was extremely busy and everyone was taking forward actions and reporting on these. It didn't feel like a collaborative process. At this point everyone was working hard to provide assurance to the clinicians but it just felt as if the goalposts were continually changing. If you don't have an opportunity to review information beforehand then it's difficult to question the contents. I was trying to support the team at this point and it was extremely challenging to try and balance support with respectful enquiry as I think that was perceived as being at odds with the local IPC team's position.

415. Different views is normally what make these processes good. Respectful challenge and different skills and perspectives is key to any good team. The IMT were trying to grapple with the complexity and changing hypothesis. IMT members were proposing ideas and this I believe was being perceived as a challenge. This challenge was not particularly welcomed by the chair. I would like to reference the External Review document section 8.17.9 "IMTs have to remain an open-minded and constructive business-like experience where participants act as a team, and where patient wellbeing prevails over notions of the moral high-ground and uniqueness and correctness of one view to the exclusion of others" **(A32385767 - Independent Review Report – June 2020 – Bundle 27, Volume 9, page 145)**.

416. The hypothesis changed over time. On reflection the only 'water' incident was the one in early 2018, after that there were other hypothesis as to why this was occurring:

a) Filters being too close to the drains.
b) Outlets were contaminated due to backflow from the drains.

c) Water was hitting the sink causing aerosolisation of the organism from the drain and that the reduced air changes meant that this was not being removed from the air.
d) Aerosolised organisms (because of the air changes) not being removed and there were hitting other surfaces and being picked up and transferred.
e) Chilled beams leaking condensate on to the patient.
f) Leak in the kitchen. Organisms from this finding their way into the patient's bloodstream.

417. There were a number of epidemiology reports trying to describe what a normal background might look like but obtaining comparable data was very difficult.

418. I believe Dr Inkster did sample around sinks (to test the aerosolisation hypothesis) and the results were negative.

419. During this time the confidence of the clinicians continued to be eroded. I was concerned about the impact that this was having to the wider cohort of patients, e.g. children going to centres across the country and being separated from their family also we had no real assurance that where they were going to was safer and delays in starting treatment. By the end of 2019, we were nearly two years down the line and there had been a lot of actions, a lot of things put in place, and a lot of information gathered. The clinicians' confidence in the building at this point in my opinion was at an all-time low. I was asked a direct question by one of the clinicians in the unit in 2019 which was; "would you have a member of your family treated in this ward" and my answer to him and the group was yes.

HAIRT Report – August 2019

420. I have been asked about a HAIRT report which was prepared for the Board in August 2019 which referred to only three cases of unusual bacteria rather

than the eleven cases being discussed in the IMT, and asked why was this. We were, I think, trying to highlight what was different and why the IMT was reconvened. The total numbers were contained in the paragraph directly below the title and I had shared this with Dr Inkster before it was issued to ensure she was content with it in an e mail on 12 August 2019. **(A49646151 – Email Chain from S. Devine to T.Inkster – Re: HAIRT – 12 August 2019 – Bundle 27, Volume 7, page 619) (A49645999 – HAIRT 19/43 – dated 20 August 2019 – Bundle 27, Volume 4, page 288)**

421. I have been asked if I had concerns about the accuracy of the report. No.

IMT – 14 August 2019

422. It has been suggested to me that there was a disagreement about the concern over the level of infections at the IMT on 14 August 2019. **(A36591626 - IMT Gram Negative Blood Ward 6A - 14.08.19 – Bundle 1, page 343)** Drs Inkster and Peters now thought that it was the nature of the bacteria rather than the numbers which was the concern, whereas Dr. Deigan (Deputy Medical Director, Corporate) referred to Iain Kennedy's report which suggested the number of bacteria had not increased.

423. I have been asked whether there was a pre-meet before the 14 August 2019 IMT. If so, who arranged the meeting and who attended. I have reviewed the minutes of the note of the meeting about the IMT held on 20 August 2019 and note that the recommendation of this meeting was "there should be a pre-meeting before very complex IMTs especially if there are results or reports that have not been circulation to the whole IMT to allow key members to review this prior to the meeting." I do not recall a pre-meeting on this date." **(A36591680 – Meeting minute in relation to the functioning of IMT dated 20 August 2019 – Bundle 6, page 70)**

424. One of the hypotheses was that the chilled beams were the problem, but there are a number of controls in place to prevent the transmission of

microorganism from the environment to the patient. These are generally referred to as Standard Infection Control Precautions and in this context would include for example, hand hygiene, use of Personal Protective Equipment, general environmental cleaning, cleaning of near patient equipment. In addition Aseptic Non-Touch Technique was being used when lines were accessed and curos caps were fitted. I believe the chilled beams to central line hypothesis was difficult for some of us to accept.

425. I am advised by the Inquiry that the issue of chilled beams was raised by Dr Inkster at the IMT on 8 August 2019. Dr Inkster later raised concerns with me, as her line manager. I have been asked what concerns Dr Inkster raised with me. I have checked my email and cannot find anything in relation to this.

426. I have been asked what my view was of the meeting on 8 August 2019 e.g. behaviour of attendees, discussion, outcome. I thought the discussion regarding the possibility of moving all of the adult patients from 4B to GJNH and then moving the patients from 6a into 4B was not justified based on this hypothesis. There was no evidence to link the chilled beams to the patients and mitigations were in place.

427. This was not a moment of disagreement. It was a moment of respectful challenge. At one point, Teresa said that I was not supporting her, but it was not my role to support her every decision. I have a professional responsibility to speak up if I was concerned about patient safety. I tried not to do this at the IMTs and instead would discuss this at our 1-1 but I was finding the balance extremely difficult to manage, especially as information was being tabled at IMTs without prior discussion.

428. I have been asked whether there was agreement or disagreement at the IMT about the epidemiology. I have reviewed the minutes and don't believe there was a disagreement re epidemiology at the IMT on the 8 August.

429. I am told by the Inquiry that Dr Inkster was concerned about the type of bacteria found, and not the number of bacteria and asked whether I agreed

or disagreed with her concerns, and why. It started to feel as if the evidence was being sought to support the hypothesis and not the evidence being collected in order to propose one. The case definitions also seemed to be expanding. There was extensive testing going on none of which was linking the environment to cases and when challenged the argument was that just because we can't find it doesn't mean it's not there which was totally understandable in 2018 but we were now almost 18 months down the line. I was worried that children would need to be diverted long term and I was not convinced that the unit was unsafe based on the previous 18 months of actions and meetings.

430. I have been asked whether I asked Dr Inkster what support she required support for IMTs. Dr Armstrong had approved extra ICD sessions and mentoring for Dr Inkster in 2019. I hope I gave her as much support as I could in practical terms and tried to do as much as I could to help. I think I did suggest at one point that perhaps she could hand the chair over to someone else and then she could concentrate on the ICD/microbiology side of things, but I don't recall exactly when this happened but it might have been after the IMT on the 14 August.

431. I am asked whether Dr Inkster made any suggestions, and if so what. I don't recall exactly but I think she said she would consider it. I recall that my impression was that she was supportive of being able to focus on clinical issues.

Note of a meeting about the IMT – 20 August 2019

432. This meeting took place on the 20 August 2019. My understanding is that a number of members of the IMT meeting on the 14th August had approached Dr Armstrong to suggest that the IMT was not functioning as it should. My understanding now is that Dr Armstrong contacted Dr Linda de Caestecker (Director of Public Health) who chaired the meeting on the 20 August to discuss this. My understanding is that as Director of Public Health Dr de

Caestecker had a role in reviewing the functioning of IMTs if concerns are raised. The attendees included Jennifer Armstrong (Medical Director), Mags McGuire (Director of Nursing), Jonathan Best (COO), Chris Deigan (Deputy Medical Director, Corporate), Tom Steele (Director of Estates and Facilities), Jamie Redfern (General Manager), Iain Kennedy (Public Health), Rachel Green (Chief of Medicine for Diagnostics), Jennifer Rodgers (Chief Nurse), Alan Mathers (Chief of Medicine for Women and Children) and Graham Forrester (Admin) who took the minutes. Dr Teresa Inkster was [redacted] so did not attend. **(A42950741 - Note of meeting about IMT of Tuesday – 20 August 2019 –Bundle 6, page 70)**

433. Despite the concerns about the previous IMT eventually being non-functional I don't believe this was the case throughout. It is a collaborative process involving IC teams, Public Health, and the clinical teams. It is usually a positive experience, where lots of different people come together to solve whatever the problem may be. It is not unusual for external experts or senior clinicians to be invited to attend. I believe now that Dr Inkster may have felt that there were people who attended that perhaps she had not approved of but generally IMTs are not rigid in terms of their membership. Dr Inkster herself invited new members to the IMT.

434. I consider that the atmosphere in the IMT at this time was highly pressurised due to intense media scrutiny. In the meeting on 20 August 2019, there was a discussion about who should be at IMTs, the way people were speaking to each other, and how information was presented.

435. This was the first time I had ever been involved in an IMT where it had come to the point where there was a review of the process. I have previously discussed the process that does exist in the national Guidance that can be implemented if this occurs. In this situation this was considered and resulted in the meeting on the 20 August regarding the function of the IMT.

Appointment of new Chair – 20 August 2019

436. The decision was made at the meeting on the 20 August to appoint a new Chair. It would have been better if I had been able to discuss this with Dr Inkster beforehand. When the meeting on the 20th took place, Dr Inkster had sent her apologies. The intention was for the next IMT to take place as normal, however none of the other available ICDs felt able to chair the next meeting. I spoke to Dr. Armstrong regarding this and because of the serious nature of the issue I was advised that this meeting must go ahead, Dr Inkster did not inform me regarding her return to work. As a result Dr Emilia Crighton was asked to chair the IMT on the Thursday evening. Dr Crighton was a Consultant in Public Health Medicine and is now the Director of Public Health.

437. I have been asked who made the decision to appoint a new Chair. This was a collective decision made at the meeting on the 20 August.

a) I am asked whether I asked Dr Inkster to step down as Chair, on 19 August 2019. I asked her to consider handing over to another chair so that she could focus in the clinical aspects of the IMT. I was also concerned about the personal impact this may be having on her.

b) If so, why? As above.

c) I am asked whether I advised Professor Gibson that Dr Inkster was in favour of appointing another chair I don't recall a conversation with Professor Gibson regarding this.

d) I am asked if Dr Inkster have a role in appointing a new chair. She did not attend the meeting on the 20 August so no she did not.

438. Dr Peters e-mailed me to say that Dr Inkster had asked her to let us know [redacted] and that she did not want to be contacted when she was off. I was aware that she had come back to work on the 23 August and I

had emailed her to say the meeting was going forward and that that there was a pre-meeting. Dr Inkster e-mailed back to say she was busy and would be late for the pre-meeting. I did think I would have the opportunity to speak to her then. I still thought that Emilia was in as Chair because we couldn't get an ICD and that Teresa might step back in on that day, although of course I was aware that the recommendation from the meeting on the 20 August was that a new chair should be appointed.

439. The reason Emilia was in as Chair on the Friday was because I could not get any of the other ICDs to chair the meeting. The IMT could not be stopped because it was critical, so it had to go ahead.

440. I have been asked whether I recollect Dr Inkster contacting me to ask why she had had to demit as Chair, and how did I respond. I don't recall this specifically but I would have let her know what had been decided at the meeting on the 20 August.

441. The decision was made on 20 August 2019 to change the Chair, and it was always my intention to discuss that with Dr Inkster as that would have been the courteous thing to do. We were a team, so I was always going to try and speak to her directly.

442. I have been asked if the meeting was minuted. Yes.

443. I have been asked who made the decision. This was a recommendation from the meeting.

Revision of IPC Incident and Outbreak SOPs following Meeting – 20 August 2019

444. The Note of Meeting mentions actions from me regarding the revision of Infection Prevention and Control (IPC) incident and outbreak SOPs. The Note states: - "…clarity of roles and responsibilities of members and chair of

an IMT. Further consideration will also be given to the identification of relevant independent chairs for the most complex IMTs. This would need to be discussed with SG in relation to ensure it is consistent with national guidance for IMTs".

445. The SOP was updated based on the experience of the IMT but it was subsequently replaced by IPC Team Incident Management Process Framework I agreed to revise the original SOP it and put in some caveats to futureproof this if this situation occurred again. There was a section in the main public health guidance that addressed if the IMT was not functioning as expected and what to do if a member of that group had a concern.

446. This was an improvement on the SOP procedure already in place.

447. I revised and redrafted the SOP. The SOP was submitted to the committees for comment and approval. Members of the Public Health Protection team were members so would have advised us accordingly. Everything we did went to SG at that time.

IMT – 6 September 2019

448. An IMT took place on 6 September 2019 **(A36591637 - IMT Gram Negative Blood Ward 6A – 06.09.19 - Bundle 1, page 354)** I do not think I had a discussion with Dr Inkster on 6 September. I understand that Dr Inkster resigned that day. Although I was ICM I did not receive a copy of her resignation letter. I regret that I was not able to tell Dr Inkster that I had tried to get others to chair the IMT on the 23 August and when I couldn't I escalated this to Dr Armstrong in order to secure someone to chair the meeting. I don't think I understood at that time that Dr Crighton would take over the chair permanently. I can appreciate why Dr Inkster thought she has been stood down without discussion.

449. The 6 September IMT was the second meeting with Dr Crighton as chair. There was a new case which Dr Murphy had raised. This patient had a number of organisms in [redacted] blood culture and the clinicians in the unit continued to be concerned about the environment.

450. At the IMT I asked Professor Brian Jones and John Mallon (Lab Manager) if a spreadsheet could be created with the results from the water and air sampling. The purpose of this was to see if there were any obvious links to patient cases. This turned out to be a complicated, resource intensive task which became to a certain extent irrelevant after the HPS report was issued. What we were trying to do was correlate patient cases with water and air sampling.

451. Professor Jones was Head of Service and previously Co-ordinating ICD and he was asked to be part of the IMT going forwards. He was the ICDs line manager and also a UK and Scotland-wide recognised adult BMT expert. Professor Alistair Leanord was also brought in as a temporary LICD.

IMT – 13 September 2019

452. In the next IMT on, 13 September 2019, **(A36591627 – IMT Gram Negative Blood Ward 6A – 13.09.19 - Bundle 1, page 360)** Professor Brian Jones and Professor Alastair Leanord were in attendance and an update on the epidemiology and results from environmental testing were discussed. It was noted that an alternative accommodation options paper had been prepared as previously requested by Mr Kevin Hill. Discussion took place with regards to water and air sampling. It was noted that there was no guidance with which to interpret air samples in specially ventilated units and therefore none for general ward areas.

453. In 2022 ward 2AB was re-opened. At that time and to date (2024) there is no Scottish guidance with regards to air sampling. Chapter 4 of the NIPCM was launched in July 2024 – Infection Control in the Built Environment and

Decontamination **(A42378956 - NIPCM - NHS NSS - Version last updated 4 October 2021 (contains references to a relaunch on 11 July 2022 and the copy being generated on 2 February 2023) – Bundle 27 - Volume 4, page 165)**. This chapter does not contain any guidance regarding air. It's difficult to interpret what results mean when you have nothing to measure them against.

454. Near the end of the IMT a peer review is mentioned by Scott Davidson (Deputy Medical Director). I think it was proposed that colleagues from Northern Ireland may be willing to review all of the cases. I believe this reaching out to colleagues was ultimately unsuccessful. We had attempted and failed to obtain benchmarking data for sources out with NHS Scotland.

IMT - 18 September 2019

455. Regarding the IMT held on 18 September 2019, the Chair recommended opening Ward 6A to new admissions, but clinicians still had their concerns. Their confidence in the general environment had been shaken. **(A36591629 - IMT Gram Negative Blood Ward 6A – 18.09.19 - Bundle 1, page 365)** The minues noted "After Mondays meeting with the clinicians there was no consensus to accept the information to reopen Ward 6A to new admissions. HPS were in attendance at the vast majority of these meetings and were continually briefing SG.

456. You would never ignore the concerns of a clinician and based on their views the ward did not re-open.

IMT - 8 October 2019

457. There was another IMT on 8 October 2019 **(A36591643 - IMT Gram Negative Blood Ward 6A – 08.10.19 – Bundle 1, page 373)**. I understand there was discussion about reopening Ward 6A to new admissions and high-

risk cases. The clinicians said they did not want the ward reopened until the peer review had been carried out. HPS had been commissioned to undertake an independent review, and the External review had already been announced. I was not in attendance at this meeting.

458. Root Cause Analysis (RCA) was first suggested by the IMT on the 13 September. On reflection carrying out a RCA or clinical review of each of the cases would have given the IMT in depth useful information. It does require a team to review the case (IPC and clinical) so it is considered resource intensive but it is now done in 2A/PICU/NICU for all patients who have a gram negative bacteraemia. RCA is probably an incorrect term. Clinical review is more accurate, although the Case Note Review refers to it as RCA.

459. I have been asked what I consider is the difference between RCA and clinical review. RCA is a more detailed process in which tries to establish the root causes of problems in order to identify appropriate solutions. The clinical review is more focused in that we know the patient has a positive blood culture and the types or risk factors this cohort of patients has so it's trying to review available information to try and determine why this may have occurred on this occasion and try to learn from this. There is a summary section which is based on the evidence gathered and asks the team to consider the potential source if they can. Sometimes it's simple, e.g. patient has a urinary tract infection and the same organism is in their blood culture but quite often with this groups of patients is much more complex.

460. The data collected is in several sections:

a) Patient personal details, DOB etc.
b) Patient Condition and Diagnosis.
c) Isolate Details (type of organism).
d) Device (when inserted, where, how long in situ).
e) Procedures (surgical, dental etc).
f) Patient Movements (pathway through the hospital, home, OPD, theatre).
g) Environmental (if there is any link to water or environmental samples).

h) Summary of clinician's review of case (including likely source and reason for positive blood culture).

461. The decision was made that we would do RCA for children who had been included as cases in the IMTs in 2019. Pamela Joannidis agreed to do a lookback exercise and complete a RCA. This was requested by ARHAI. There was no existing template for this, so Pamela made one and sent it to ARHAI for approval. This is something that continues to today.

462. I have been asked when the decision was made to do RCA for children. IMT on 13 September 2019.

463. There is now a report that is issued each month to clinicians within PICU/2A/NICU it includes copies of any clinical reviews undertaken, SPCs (based on the ARHAI methodology) are also sent to these units to demonstrate cases over time. The methodology in terms of putting different types of organisms together and what would be considered a trigger is currently (July 2024) being tested in two boards in Scotland.

IMT - 11 October 2019

464. The IMT meeting held on 11 October 2019 **(A37992498 - IMT Gram Negative Blood Ward 6A – 11.10.19 – Bundle 1, page 382)** was described as extraordinary, as the purpose of the meeting was to go through the completed RCA which Pamela had done. It did not follow the IMT standard agenda as no control measures, further investigation or HIIAT score were discussed.

IMT - 25 October 2019

465. At the next IMT meeting on 25 October 2019, there was discussion of RCA and the hypothesis with regard to SmartSites. **(A37992819 - IMT Gram**

Negative Blood Ward 6A – 25.10.19 – Bundle 1, page 388) These SmartSite hubs are impregnated with alcohol and they were located on the end of the line, so in theory they are always killing bacteria around the lines. There were grooves in the SmartSite. Pamela was always slightly concerned about this, as anywhere you get a groove, bacteria can grow. Kathleen Harvey Wood had sampled these devices but I don't believe she ever submitted her findings to the IMT.

466. The HIIAT had been agreed as green, and Jennifer Rodgers informed the IMT that there is a significant pressure regarding capacity in both the Edinburgh and Aberdeen hospitals. That impact should be considered in any risk assessment.

The decision to re-open Ward 6A – November 2019

467. The decision to reopen Ward 6A to new admissions was taken in November 2019. This decision was taken by the SG and I believe was largely based on the commissioned the HPS report.

IMTs – November 2019

468. The IMT running between 5 and 14 of November 2019 discussed the HPS report and the decision to reopen Ward 6A. **(A36591709 - IMT Gram Negative Blood Ward 6A – 05.11.19 – Bundle 1, page 392) (A37993248 - IMT Gram Negative Blood Ward 6A – 11.11.19 – Bundle 1, page 397)**

469. The IMT discussed a Ward 6A reopening bundle. It was operational. The bundle was a series of actions to be completed before it reopened to admissions. I was not involved in drafting the bundle, but there would have been actions for me or my team to take forward and a lot of operational actions to complete.

470. At the IMT on 14 November 2019, HPS were asked to confirm that GGC could lift restrictions on Ward 6A, which they did. **(A37993497 - IMT Gram Negative Blood Ward 6A – 14.11.19 – Bundle 1, page 402)** In my experience it's very unusual for the government to make the decision to open a ward. HPS are the national clinical experts. In terms of SG, they had to have assurances from HPS that it was safe to open the ward.

471. Post escalation we were required to give presentations to the Oversight Board every 2 or 3 weeks. SG and HPS were both represented on the Oversight Board. When the Board went into special measures, Marion Bain was appointed [by the Scottish Government] as the IPC Executive Lead. In February 2020, Professor Angela Wallace was also appointed as the Operational Lead for IPC. Jennifer Rodgers reported several times a week on any issues occurring in 6a. She sent this to Angela O'Neill (Acute Nurse Director) who I recall also had a role in oversight for SG. Anything that happened in Ward 6A was reported and sent to the government.

472. At this time, we were using a template that HPS had provided to analyse cases and data. This was monitored but if anything on the ward out of the ordinary happened it was reported even down to reporting a leak in one of the toilets due to a washer degrading. Despite the IMT's completion there was still intense scrutiny as the board had been escalated to level 4. Marion Bain was appointed by SG and sat on the board as the Executive Director for IPC. Professor Wallace was the Executive Nurse Director for NHS Forth Valley and was initially seconded as IPC Director but ultimately I believe was the IPC Executive Lead. They both attended IMTs for PICU.

Communications

Patient and Families Questions

473. Seventy-one questions came from parents about their concerns with Ward 6A. Everybody was involved in dealing with those questions, including me, if

there were questions that were about IPC. I cannot describe the governance of these questions.

Communications and IMTs

474. On the back of the IMTs there was communication to patients, parents, and staff members. I can't recall details as this was a hectic time but I know many different people were dealing with this over a prolonged period of time. I would refer you to my colleagues in communications for additional detail. As previously stated I am aware that the senior management team in Women's and Children's Directorate considered this a priority and often at the end of an IMT I am aware they were going to the ward to provide information to patients, parents and staff. Often I would have sight of press releases as ARHAI normally required copies. I am also aware that communications were being approved by SG when the board was in escalation. Dr Inkster and Gibson were involved in drafting lines for both the press and patients.

475. The press office often advise the IMT on communications; they are members of the IMT and their contribution and perspective is important. We have a communications strategy specifically in relation to IPC which is authored by colleagues in the communications team. The guidance from SG around communicating with patients was issued in February 2020. Prior to this I don't believe the guidance was clear. There is also a balance to be struck between informing patients and the confidentiality of the individual.

476. Generally, the IMT has responsibility for communication and the decisions made about communication. The Board has oversight because they need to know what is going into the media. It is a collaborative process. The IMT might draft and supply the facts, and the communications team put it into plain English. The Chair of the IMT contributes to any press release drafted. I am quite often copied into these and asked for any comments which I give.

General Communication

477. Every time we had an IMT, Jamie Redfern and Jennifer Rodgers would speak to all the families, sometimes along with the clinicians. That is not something that happens normally. Clinical staff within the ward will have conversations with families on an ongoing basis but I can honestly say that I have never been involved in an IMT where this level of communication was standard.

478. There were concerns from parents about the information they were getting and what was going on. It is obviously highly emotive if it is your child. My overall impression was that people were actively trying to communicate as much as possible, but some may have felt this was not enough.

479. The point of contact with regards to patients with infection is their clinician. Members of the IPCT can speak to patients regarding particular infections but the primary responsibility lies with the clinical staff. This is the relationship that the patients and in this case parents rely on. Bringing a lot of people in to give different types of information is probably not helpful.

Use of prophylactic antibiotics

480. I have been asked whether I was aware of particular patients suffering from infections that are potentially linked to the environment other than what I heard at the IMTs. Patients that met the agreed case definition were presented by the LICD at the IMT. To support patient confidentiality these are often referred to by their initial.

481. Prophylactic antibiotics are prescribed by medical staff. This is occasionally discussed at IMTs. I would not draft a SOPs about prophylaxis, it is not part of my role.

Duty of Candour

482. I am aware of guidance with regards to duty of candour. We now have duty of candour guidance which is included in IPC Incident Management Process Framework. It is considered within the context of an IMT by those attending the meeting if felt to be relevant.

483. The IMT duty of candour guidance is new. Duty of Candour Legislation was introduced in March 2018 so almost exactly at the time the first IMTs took place. The Case Note Review recommended it should be considered more thoroughly in the round and the Director of Clinical and Care Governance worked with us to draft up something that we could use within the IMT process. In terms of IMTs I attended, where the duty of candour was discussed, I think it was appropriately considered and dealt with. There is no national guidance to date regarding the application of DOC in relation to IPC.

484. There is a module regarding duty of candour on learn- pro. This is not one of the mandatory modules however as with all education we encourage staff to compete modules relevant to their practice. I have encourage my own team to complete this and the Clinical Governance team can support training for teams.

Whistleblowing and the reporting of wrongdoing, issues, or inadequacies

485. If I had concerns about wrongdoing, failures, inadequacy within the system or within the Board, I was aware of what to do. It would be a normal process to raise this through your line management structure and discuss it. With

regards to the communication regarding the adult BMT information regarding this went out in the Core Brief, so thousands of people in NHS Glasgow and Clyde knew that the adult BMT patients were being transferred back to the Beatson because there was a problem with the facility.

486. As far as I am aware there was no attempt to withhold information. There were many forums in which information was shared but it also true to say that what was requested may not have been available or people were unaware of how to locate it. If staff have concerns there are numerous ways to highlight this.

487. There is a whistleblowing policy. I do not feel that people within the organisation are discouraged from raising concerns. If you have a concern, there are multiple ways that you can raise it.

488. Regarding the broadcasting of the BBC Disclosure programme about the QEUH, we were not briefed nor had any discussions before the programme aired.

Reviews of QEUH

489. There have been reviews such as the Independent Review, Oversight Board, HSE Investigation, the Case Note Review, the investigation by Police Scotland and now the Scottish Hospitals Inquiry. I have been involved in all of them, and it has been extremely challenging and stressful. The Oversight Board in particular was difficult in that I consider that representatives from GGC were treated appallingly. There was no willingness to accept another view even when backed up with evidence. Worse still was the implication that patient safety was not our priority. Members of the oversight board were partners in the IMT process so this seemed at odds with the position adopted by colleagues out with GGC.

490. I was sitting in the Oversight Board presenting factual evidence in response to questions raised. I relied on the wider IPCT to help me with this and the continual request for information had a negative impact on the team who considered, as I did, that we were doing everything we could to address the issues and that our processes were as good as other NHS Boards At the same time we had been giving extensive information to the external enquiry, case note review, HSE and SG. This led to the team questioning their own practice and actions continually and this does erode confidence over time no matter how diligent the team where in term of carrying out their clinical duties. GGC had reached out to external experts, ARHAI, DOH England and SG. One of the conclusions was that we followed policy too closely. We had put in actions no other board in NHS Scotland had been asked to implement. The scrutiny was paralysing at times.

491. I believe to this day, our systems and processes were good, if not better than a lot of other boards. As soon as any guidance/policies were issued nationally, the first thing we did was scope a process to implement.

492. Providing so much information has had an impact on everyone in IPCT. We had done everything we could to try and solve this problem, to mitigate the risk, and to make things as safe as possible. This has to also be viewed in the context of the role of the IPCT in responding to a global pandemic. I am extremely proud of the IPCT in GGC.

Changes which have been introduced

493. The team structures are largely exactly the same and the local teams support and learn for each other. Actions from the various reports have been put in place and are monitored by the Chief Executive office. I welcome any improvements suggested and we have made improvements to how we do things but I contest the assertion that any of these reports pointed at something that was not in place in terms of IPC which should have been.

494. There are actions that I put in place which I think make things more robust in certain areas but we are doing things that nobody else in Scotland is doing. An example of this is the clinical review which is carried out for all gram-negative blood stream infection in PICU, NICU, and 2A. We have used the ARHAI methodology with regards to trend data for these infections in these wards for several years now and as previously stated this is currently being trialled in two other boards in Scotland which in turn means that there is no established National methodology currently in place for gram-negative surveillance. Professor Leonard's work on whole genome sequencing is ground-breaking and will be a huge benefit to patients going forward. Our Authorising Engineer for water often states we do more sampling that anyone else in Scotland and probably beyond.

495. There has to be a balance. You have to work within the resource you have and prioritise. By resource I don't just mean financial. IPC practitioners take years to train and the demands on their time is expanding exponentially.

496. I do not believe you can avoid all healthcare associated infections. As long as we use drugs, invasive devices or surgical procedures to treat patients there will be a risk of infection. Children with cancer require toxic drugs that suppress their immune system and these are quite often administered via invasive devices. Children need to play with other children and toys. They need the support of their siblings and parents, this makes them unique in terms of preventing infection.

497. I believe there are lessons to be learned across NHS Scotland. I believe we are a service that has always strived to improve.

498. In terms of incident management we continue to refine our systems and processes, e.g. the IPC Incident Management Process Framework which builds on the existing guidance but explicitly links this to other parts of the system, e.g. risk management, escalation, communication, duty of candour. We continually update our alert organism list based on emerging problems and local concerns but this has been the case for many years.

499. In terms of audit the IPCT had a large audit programme which included compliance with SICPS, TBP, CVCs, PVC and some consideration of the patient environment but the oversight board felt was better led by senior charge nurses in wards and departments. We now complete 20% of the SICPs audits across the board. We also undertake this if there is an incident or outbreak. Hand hygiene audits are also completed during incidents. I agree that in terms of sustained improvement, you are better utilising a quality management system. There is now an IPC quality improvement network with specific work streams to support improvement initiatives across the board. This network membership has clinical staff from many different specialties across the board area.

500. Prof. Wallace also suggested the development of an IC dashboard which is now in place. This means clinical staff have access to real time data for ECB, CDI, SAB and Surgical Site Infection.

501. Dr Peters gathers specific information from the laboratory system and this is a separate system of surveillance which we do not have access to but we have our own systems as described.

502. When requested by clinical team we always review cases or situations. The multidisciplinary 'buzz' meeting was designed to share information and alert each other to anything that may have an impact across diagnostic services and the IPCT. I felt that initially this was used by Dr Peters as a forum to demand updates on patients and incidents. This takes me full circle to Dr de Caestecker's recommendation from the whistleblowing report from 2018 in which it was recommended that "the infection control team should be supported to deal with multiple e mails from Dr Peters about issues in which she has no direct role." I felt this meeting empowered Dr Peters to feel able to hold us accountable for our practice. This is not her role and certainly not a position we find ourselves in with any other clinician. It is my opinion that there was a deliberate attempt by Dr Peters to undermine the IPCT during these conversations.

Internal review of alert organism reporting systems

503. We have a group led by our LICD Dr Bagrade to review our surveillance systems and this includes alert organism. An agenda item on the IPC governance groups is any changes to the manual. These groups meet every two months so we are continually updating our processes in response to changes in the manual and also reporting on changes in response. The agenda item has been in place for several years but the formal group is a relatively recent development however new alerts have been added to the systems continually over time. The term hospital acquired is somewhat dated now so we are in discussion at the group regarding the terminology and it has been proposed that we simply use healthcare associated infection and community rather that the three categories.

504. There are some organisms that can only be definitively confirmed after samples are sent to the reference laboratories. This is a gap in the system in that the results are sent to the laboratory from the reference laboratory and our systems cannot capture this. In this situation we rely on the laboratory contacting the ICD..

505. At the moment SG are scoping a single system for NHS Scotland. Information from our system would be helpful to another board IPCT but at the moment it is not possible to share information across boards via the existing systems.

506. IC Net links to several systems, for example OPERA which is the surgical system so that we can determine what operation the patient had, when they had it and who the surgeon is. Another is TRAK which means we can chart a patient's path through wards and departments, this was crucial during the COVID pandemic.

507. All results eventually go into Clinical Portal which is a repository for all the patient's clinical information. Aspergillus is probably one of the most complicated infections to confirm in that it is a clinical diagnosis and relies on several types of clinical information in order to come to the diagnosis, microbiology, biochemistry, radiology. IC net pulls across positive microbiology and virology results but if you had a patient who you suspected had invasive aspergillus then a review as described above would be carried out by the clinician caring for the patient.

508. The data team prepare weekly summary reports that the ICDs and I receive. We have a weekly summary report of any environmental bacteria that has been isolated in high-risk units. This is an overview of what is occurring across the board. This is in addition to the single alerts the teams receive, the trigger alerts in place, the SPCs. The system is layered but this is necessary due to the size and complexity of the organisation.

509. I believe the systems in place were and are robust and aligned with the requirements contained within the NIPCM.

510. In terms of the clinical review this was requested as an action from one of the IMTs and the template was shared with colleagues in ARHAI prior to this review being undertaken.

511. I am asked who had a note of the meeting and the actions to be taken, and if the note had a title. It was requested at the IMT on 13 September 2019 **(A36591627 - 13.09.2019 IMT Gram Negative Blood Ward 6A – Bundle 1, page 360)**. There would be a note of that meeting.

Early Warning System

512. We are currently working to develop an early warning system. We hope to triangulate different types of data for example acuity, occupancy, staffing numbers as well as infection rates. This is being led by the LICD. We had

been in conversation over the past several years with ARHAI but they had to pause this work due to COVID. I know they are looking at triggers and surveillance for gram-negative infections and I understand this is being trialled in two boards in Scotland at the moment. This initiative is in the early stages of development but as previously stated we continue to use the ARHAI methodology suggested for 2A and these reports are sent to the clinicians monthly. In addition we have included PICU/NICU in this and they also receive monthly reports.

513. I think instinctively we all think that when clinical systems are under pressure that infection rates may increase. What we are trying to do is devise a system where we know what the background level and offer support before this occurs.

Searchable Database

514. I have been told that, in relation to the searchable database, the Case Note Review stated,

a) "The searchable database of microbiological-type results had not been created," although it was in progress,

b) "There was no ability to search the database to relate potentially linked bacteria".

This data base was developed and is in place and ICDs have access to it.

515. The Case Note Review requested information that would link the patient pathway to microbiological, location data and any water or environmental results **(A33448007 - Queen Elizabeth University Hospital and Royal Hospital for Children: Case Note Review Overview Report dated March 2021 – Bundle 6, page 975)**. This information was either not available or in separate systems and I understand that every effort was made to make this information available to the review but I also think that I recollect that this

took the laboratory staff quite some time to complete. IPCT could identify the patient, the organism and the patient's locations. During the IMT with regards to water and environmental samples this was possible to a degree but it was at that time an immature system.

516. In terms of the database, this was developed by e health. The lead developer did some demonstrations to colleagues in microbiology. The General Manager Rob Gardiner asked that the demonstration should be given to all of the microbiologists. It was also demonstrated at one of the 'buzz' meetings. It was presented to the members of the 'buzz' meeting two or three times as it was being developed.

517. I have been asked whether the demonstration of the database and the buzz meeting were the same event, or different ones. My recollection was that it was demonstrated at the buzz but that there were sessions arranged for the wider microbiology department.

518. I have been asked when the meeting occurred. Buzz takes place every Tuesday.

a) I am asked if minutes were taken Informal meeting so no.

b) I am asked what the title of the meeting was
The proper title of the 'buzz' is 2 Microbiology, Infection Control, Virology Team (2MIVT)

FM First Estates Management System

519. I do not know anything about the FM First Estates Management System other than it exists and it is a national system.

Statistical Process Control Charts (SPC) and Interval Charts

520. We have used these for a number of years. If the numbers do not support the population of these, i.e. there are too few cases then we use interval charts i.e. time between cases.

521. SPCs demonstrate numbers over time. In real time patients are referred as soon as they are positive in the laboratory and are reviewed as single cases. We have triggers which are normally set at 2 hospital acquired infections in two weeks, which results in an additional process and then the SPC demonstrate trends over time so it's a system with various stages. All cases are reviewed/investigated by the team and data is collected. The ICNs go to the wards and speak to the nurses and if requested the patient and give verbal advice and leave information e.g. check list, patient information. ICDs will give advice if an organism requires to be sent for typing. Typing can confirm that cross transmission has occurred between patients either by direct or indirect contact.

Standard Definition of an Outbreak

522. We use the definitions contained in the NIPCM **(A42378956 - NIPCM - NHS NSS - Version last updated 4 October 2021 (contains references to a relaunch on 11 July 2022 and the copy being generated on 2 February 2023) – Bundle 27, Volume 4, page 165)**. There are limitations of the SPC methodology in that they are normally produced monthly. We would not wait until the end of the month to review these and then decide we had an increased incidence. We have the referral, the trigger, tally charts that are updated daily and the SPCs.

523. I have been asked which standard definitions are covered in the National Manual. NIPCM Definitions of Healthcare Infection Incident, Outbreak and Data Exceedance. The terms 'incident' and 'Incident Management Team' (IMT) are used as generic terms to cover both incidents and outbreaks

a) A healthcare infection incident may be:

i. An exceptional infection episode - a single case of rare infection that has severe outcomes for an individual AND has major implications for others (patients, staff and/or visitors), the organisation or wider public health for example, high consequence infectious disease (HCID) OR other rare infections such as XDR-TB, botulism, polio, rabies, or diphtheria.

   See literature review for Infectious Diseases of High Consequence (IDHC)

ii. A healthcare infection exposure incident - Exposure of patients, staff, public to a possible infectious agent as a result of a healthcare system failure or a near miss e.g. ventilation, water or decontamination incidents.

iii. A healthcare associated infection outbreak - Two or more linked cases with the same infectious agent associated with the same healthcare setting over a specified time period.

   or

   A higher-than-expected number of cases of HAI in a given healthcare area over a specified time period.

iv. A healthcare infection data exceedance - A greater than expected rate of infection compared with the usual background rate for the place and time where the incident has occurred.

v. A healthcare infection near miss incident - An incident which had the potential to expose patients to an infectious agent but did not e.g. decontamination failure.

vi. A healthcare infection incident should be suspected if there is: a single case of an infection for which there have previously been no cases in the facility (e.g. infection with a multidrug-resistant organism (MDRO) with unusual resistance patterns or a post-procedure infection with an unusual organism)

524. SPCs are best used from point of care to Board. You may expect to have for example 10 cases of C. diff each month in a hospital but you could have one ward with 9 cases and you wouldn't know this unless you used there charts from ward to board. Of course this would only occur if this was the only method of surveillance you were relying on.

525. I have been asked whether SPCs were all that was available 10 years ago. No, we have been using IC net for 15 years but before that we would use excel spreadsheets, access databased or epi info which was a free package that you could obtain from the centre for disease control in the USA.

Report - Summary of Patient Safety Indicators

526. I have been asked if I am the author of a report titled "Summary of Patient Safety Indicators", submitted to the Inquiry on behalf of Greater Glasgow Health Board, along with their response to the Inquiry's Provisional Position Paper 5 **(A43708013 - NHS GGC Positioning Paper on Infection, including Appendix 1 - Summary of Patient Safety Indicators by Sandra Devine - 05 April 2023 – Bundle 25, page 345)**. Yes. This was a summary of the available data that we had and in no way was it supposed to refer to

2AB/6A specifically. It was a summary of the available external indicators for the whole campus.

Root Cause Analysis and Clinical Review

527. Clinical reviews are now done in Ward 2A, PICU, and NICU if there is a patient who has a gram-negative bacteraemia. This is a done with a member of the clinical team and a member of the IPCT. Please refer to paragraph 310 for details on information collected.

528. It is a pro forma paper tool which was developed by GGC and approved by ARHAI in 2019. When completed this summary is sent to the clinicians in the ward immediately. Each month in 2AB a summary report which includes any clinical reviews done, any results from the multidisciplinary assurance review process and any other incidents is sent to the clinical team and the W&C Senior Management Team. This report is included in the papers for the W &C governance groups and if the clinicians have any concerns the LICD attends the 2AB governance group to go through the report in detail. This is a process in addition to the other processes re referrals previously referred to in earlier paragraphs.

529. The clinical review document also considers the patient's environment and asks specifically:

- Has the organism (species not typing) isolated from blood culture been isolated for any recent environmental samples (include water, drains, ventilation, environmental swabs) if yes where and what date.
- Has the patient been exposed to an unfiltered water source in 30 days before blood culture (where i.e. home)
- Have any environmental issues been reported in the 30 days before blood culture in the areas visited by the patient and within close proximity (same floor) what were they (leaks, chilled beam issues, domestic cleaning).

- Water checklist (pseudomonas) – any issues identified.
- Ventilation issues – any reported in the last 30 days on patient pathway including theatres where relevant.
- Is ventilation validation up to date.

530. Colleagues from EFM send out of spec water samples to LICNs and ICDs so they can refer to these to inform the above process. There is a number of years of data available in relation to water testing. We only carry out environmental swabbing if an ICD instructs it. If there were two children with the same organism, then the ICD would review and instruct a PAG/IMT if required. Typing is often a part of this process.

531. In some cases the conclusion of the clinical review is that the source is unknown. The children on 2AB are very complex and are often severely immunosuppressed. They are vulnerable to lots of types of infections and this is often thought to be the source, e.g. urinary tract infection, chest infection, skin/soft tissue infection. In a percentage the source is thought to be gut translocation, i.e. bacteria from the gut leaks into normally sterile tissues and internal organs.

Problem Assessment Group (PAG)

532. A Problem Assessment Group (PAG) can be convened for any potential incident, however if the team feels that there is definitely an issue this can be bypassed and an incident management team (IMT) meeting can be convened. To inform the PAG and to determine if indeed there is a problem the ICD might ask for additional water sampling or environmental sampling. They may also request a timeline if they think that there may be a possibility of a time, place, and person connection. The enables the PAG to reach decisions. There are normally two potential outcomes:

a) No significant risk to public health and/or patients; the PAG stood down, but surveillance continues or

b) There are some concerns and the situation is assessed using the National Healthcare Infection Incident Assessment Tool (HIIAT)

533. There can be different types of patients in PICU and some of this is based on the prevalence of certain infections commonly presenting in the winter months. e.g. Respiratory Syncytial Virus (RSV). I understand from colleagues that elective surgical admission to PICU is higher in the summer for this reason. The adult ITUs are like that to a certain extent, but not to the same extreme. If the returned SPC indicated that there was an increase in positive specimens from Bronchoalveolar Lavages (BAL) the clinicians would review with IPCT to determine if there are any reasons for this and one of them could be that it is winter and they are doing more but this is a collaborative multidisciplinary process and normally a very positive one. This is an example where a PAG could be held and the sharing of information leads the group to come to decisions re actions.

534. I have been asked what the SPCs might say. That the number in the unit are higher than average or even hitting a control limit or upper warning limit.

535. I have been asked what the clinicians get now. Clinical staff in PICU/NICU/2A get clinical reviews immediately and their SPC (ARHAI template) monthly.

536. I have been asked what I saw with an increase in BAL. I can't recall this example specifically now but it could have been technique, types of patients in the unit. If it was the same organism then this would have triggered on our systems and an additional IPCT review would have been undertaken.

Review Meeting of Clinicians

537. Each time a Clinical Review is undertaken this is sent to IPCT and the Clinical team as soon as this has been completed. The ARHAI based SPCs are sent monthly. As the clinical reviews are sent at the time of the review a

summary report is also submitted monthly which contains all the reviews for that month, the results of any multidisciplinary assurance review and any ongoing incidents. This goes to myself, the LICD, the clinicians in the unit and the Director of Women & Children. Initially there was a separate meeting but quite often there were one or no cases to review and the clinical teams did not feel this was an effective use of their time especially when the COVID pandemic was ongoing. Now if there is any concerns regarding the report the LICD attends the 2AB governance group to go through the report in detail. The report also goes to the W & C clinical Governance Group.

538. I have been asked if the meetings minute. I would need to defer this question to Mr Redfern. In the GGC response to the Case Note Review recommendation, GGC indicated that the IMT process framework has been developed **(A35308861 - NHS GGC Response to Case Note Review Overview Report - February 2021 - Bundle 27, Volume 6, page 245)**. I drafted this document. If refers explicitly to the National Guidance and Chapter 3 of the NIPCM. It has explanations of what a PAG is, what an IMT is, references the risk register, and escalation. This is what has been developed to replace the Incident and Outbreak SOP.

539. I have been asked the following:-

a) Have you read the Overall Report of the Case Notes Review and noted its recommendations? Yes

b) Have you read the Interim Report and/or Final Report of the Oversight Board and noted its local recommendations in respect of Infection Prevention and Control? Yes

c) Have you read the Interim Report and/or Final Report of the Oversight Board and noted its local recommendations in respect of Governance and Risk Management? Yes

d) Have you read the Interim Report and/or Final Report of the Oversight Board and noted its local recommendations in respect of Communications and Engagement? Yes

e) What steps have been taken by GGC to implement each of separate recommendations of the Case Notes Review, when they were taken and to what extent do you consider the implementation to have been effective?

i. There was a process set up by the Board in which all of the recommendations from each of the reviews were collated together into a single action plan and different actions were allocated to different teams depending on who was best placed to take these forward. There is a rolling programme where we are sent the actions (each action is sent individually) and we are asked to update on the progress and add supporting evidence. This is a rolling programme and has been in place for at least two years. This action plan includes the recommendations for the external review as well as the case note review and oversight board recommendations.

ii. Anything that improves systems and processes I'm supportive of. I would have liked to extend the use of the clinical review tool but the workload of the teams post pandemic has increased significantly.

iii. The requirements to fulfil the requirement of NHS Assure in itself has added a significant burden to local IPCTs. Only this week we have been asked to do a pseudomonas risk assessment in every high risk area across the board. I feel compelled to say, that the impact on clinical staff to fulfil the information requirements for all of the above and the Inquiry has been significant.

f) What steps have been taken by GGC to implement each of separate recommendations of the 'Local Recommendations' of the Oversight

Board, when they were taken and to what extent does the witness considers the implementation to have been effective?

i. Please see statement above.

g) Can you point us to documentation that confirms your position in respect of whether recommendations have been implemented?

i. This should be directed to the PMO office for the full set of documents.

IPC Audits and Frequency

540. There are now four key IPC audits templates used. Standard Infection Control Precautions (SICPs) Hand Hygiene, CVC and PVC. Before we received the recommendation of the Oversight Board we had a local audit tool that we called IPCAT (Infection Prevention Control Audit Template) this was essentially four audits in one tool. We audited compliance with SICPS, Transmission Based Precautions (TBPs) CVC, and PVC. This was done yearly and was hosted on a platform that enabled action plans to be generated for senior charge nurses to return to IPCT. The oversight board felt IPC audit should be in the main conducted by front line clinical teams and not IPCTs. SICPs are the key standard and this is now on the CAIR (Care Assurance Improvement Resource) dashboard which is a national system. We do carry out SICPS audits in 20% of the board area and in all high risk units for assurance. There are ARHAI 'bundles' which inform the PVC and CVC audits. They are called the bundle because there are five key things you need to do to make sure a device is safety inserted and maintained. You cannot do one or two, you need to do all four/five for it to be compliant. We used the bundles as questions and we check compliance with the bundles on the wards.

541. I have been asked to specify the types of audit We have many types of audits. We currently have four core audits: SICPS, CVC. PVC, Hand Hygiene.

542. I have been asked whether we do four or five things to ensure compliance. I have taken elements from the ARHAI Peripheral Venous Catheter Bundle:

a) Ensure that a PVC is clinically indicated for this patient.
b) Hand hygiene has been performed immediately before PVC insertion, before and after palpation and before donning and after removing PPE.
c) Skin is cleansed with a single-use antiseptic containing 2% chlorhexidine in 70% isopropyl alcohol and left to dry according to manufacturer's instructions before insertion.
d) Aseptic technique is maintained throughout the insertion procedure; i.e. key parts and key sites are not touched.
e) The catheter site is covered with a sterile transparent semi permeable dressing. Sterile gauze dressings may be used if there is bleeding/oozing. Gauze dressings must be replaced with a sterile, transparent semipermeable dressing as soon as possible.

543. IPCT would do a hand hygiene audit and a SICPs audit. We will put some audit process into an IMT during an incident or outbreak.

544. SCN are also required to undertake a monthly hand hygiene audit. GGC have retained the post of a dedicated Hand Hygiene Coordinator. The HH co-ordinator does a snapshot audit in various locations across the Board every month, he also supports education. If there is an issue with hand hygiene identified during an IMT he will take any actions forward. ICNs also carry out HH audits.

Final Views on QEUH and RHC

545. Given the improvements that have been made to the hospital since opening, for example 4B and 2A and 2B wards, I'm very confident in it as a facility. Ward 2A is probably one of, if not, the best haemato-oncology facility in the UK.

546. I understand that NHS Assure role is to give assurance to the Scottish Government that systems and processes are in place in terms of new builds and major renovation projects, but our expectation was that they would be a central repository for information and advice. The Key Stage Assurance Review (KSAR) process* has in essence added a layer of external scrutiny over projects. There is an expectation that IPC have input at all stages; this unachievable. I would welcome NHS Scotland Assure as national advisors providing advice on a single design specification for hospital new build projects. It seems logical to me that lessons and good practice learned could be shared more productively and a partnership approach adopted. Some boards will never have had to plan a large project, there should be ways in which this type of intelligence could be shared. *KSAR focus on making sure that infection prevention and control are key consideration in the following parts of a build project:

a) Water and drainage
b) Ventilation
c) Electrical
d) Medical gasses
e) Fire

"the assurance service will operate in an advisory, assurance and compliance capacity and will work with Health Boards throughout these three levels with approval of reports and action plans" ref: National Service Scotland.

Closing Statement

547. The impact on patients who require to be cared for in the QE/RHC and the staff who provide that care cannot be overestimated and I doubt the reputation of both hospitals will ever recover completely. Personally I have been profoundly disappointed in how politicians, specifically Jean Freeman and Anas Sarwar, have used the events at the hospitals as a political football with little or no regard for the effect on patients or staff.

548. Regrettably it felt like senior colleagues within Scottish Government Health Directorates, who became involved, treated their colleagues working at QEUH with something like contempt. This was particularly true of those with significant involvement such as Fiona McQueen, Philip Raines and Lesley Shepherd. The staff at GGC were doing their utmost to provide safe services whilst being undermined by the use of invalidated information from challenged sources, this information was used to accuse staff within GGC of incompetence, however, personally the position taken which caused the most distress was the questioning of the integrity and truthfulness of what was being reported honestly and with rigour.

549. The Case Note review commissioned by SG was a particular low point **(A33448007 - Queen Elizabeth University Hospital and Royal Hospital for Children: Case Note Review Overview Report dated March 2021 – Bundle 6, page 975)**. We were in the acute phase of a global pandemic and every effort was made to work with and supply information requested as quickly as possible, however much of this information required collation by members of staff (particularly in laboratory medicine and estates) who were already under a great deal of pressure due to the pandemic; this was presented as lack of transparency or active co-operation which was far from the reality. It was also disappointing that there was no real effort to fully engage with GGC or understand our context or comments.

550. As soon as issues arose in RHC GGC reached out to appropriate Scottish bodies (HFS/HPS/SG) and other experts throughout the UK for help and

guidance. When SG escalated the board to level four it was hard to comprehend that myself and colleagues in GGC were judged and criticised by those whom we had reached out to for help. My hope at the end of this process, is that patients and relatives can be assured that staff within GGC do their utmost to provide services that are safe and that they are confident that the primary intention of staff throughout GGC is to achieve this despite how our conduct has been reported and represented by others.

551. It's difficult to describe the personal impact of the systematic undermining and scrutiny that I have experienced over a number of years, as myself and other colleagues have tried to address the issues raised in a professional manner, whilst supporting our own teams who have also been acutely affected. I have no doubt my family has suffered and I personally feel I have had many periods of prolonged and intense stress. I work with a group of professional, focused, hardworking individuals whose overwhelming concern is to deliver safe care; the injustice experienced by this group is I believe without precedent in the delivery of healthcare. I compel anyone reading this to consider what the effect this process will have on the delivery of healthcare in future, personally, I have no idea why any individual would chose to work within the field of infection prevention and control based on the excessive levels of scrutiny and criticism we have experienced within the IPCT in NHSGGC and I say this with profound regret after having spent 30 years of my career in this field.

552. Please note the content of this statement is based on my recollections and documents that I have been able to review.

Declaration

553. I believe that the facts stated in this witness statement are true to the best of my knowledge, information, and belief. I understand that this statement may form part of the evidence before the Inquiry and be published on the Inquiry's website.

The witness was provided the following Scottish Hospital Inquiry documents for reference when they completed their questionnaire statement.

Appendix

A43255563 – Bundle 1 - Incident Management Team Meeting Minutes (IMT Minutes)
A43299519 – Bundle 4 - NHS Greater Glasgow and Clyde: SBAR Documentation
A43293438 – Bundle 6 - Miscellaneous Documents
A45379981 - Bundle 9 - QEUH Cryptococcus Sub-Group Minutes
A47390519 – Bundle 11 - Water Safety Group
A48818504 - Bundle 13 - Additional Minutes Bundle (AICC/BICC etc)
A49384241 - Bundle 14 - Further Communications - Volume 1
A47392376 - Bundle 15 - Water PPP
A49505067 - Bundle 23 - Queen Elizabeth University Hospital and Royal Hospital for Children, Isolation Rooms PPP
A49553951 - Bundle 25 - Bundle 25 - Case Note Review Expert Panel, Additional Reports, and DMA Canyon
A49906791 - Bundle 27 - Miscellaneous Documents – Volume 4
A49756324 - Bundle 27 – Miscellaneous Documents - Volume 3