Witness Name: Caroline Lamb
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UK COVID-19 INQUIRY
MODULE 5

WITNESS STATEMENT OF CAROLINE LAMB

This statement is one of a suite provided for Module 5 of the UK Covid Inquiry and these should be considered collectively. In relation to the issues raised by the Rule 9 request dated 02 September 2024 in connection with Module 5, I, Caroline Lamb, will say as follows:

Professional background

1. The office of Chief Executive of NHS Scotland and Director General of Health and Social Care was held by the following people between June 2019 and January 2021:

   - Malcolm Wright (June 2019 to May 2020);
   - John Connaghan (Interim Chief Executive; May 2020 to January 2021); and
   - Elinor Mitchell (Interim Director General; May 2020 to December 2020).

2. The position was split into two in April 2020 when John Connaghan and Elinor Mitchell took up interim posts. It was then merged back into a single position from January 2021 when I took up post. I remain in that post now.

3. Prior to taking up my current post, I held other health-related positions within Scottish Government: I was Delivery Director for the Extended Seasonal Flu and Covid-19 vaccination programmes from August 2020 to January 2021; Portfolio Director for Test and Protect from May to August 2020; and Delivery Director for Intensive Care Unit Expansion from March to May 2020.

4. In preparing this statement, I have received drafting assistance and input from the Scottish Government's Covid Inquiries Response Directorate. Unless stated otherwise,

the facts stated in this witness statement are within my own knowledge and recollection and are true. Where they are not within my own knowledge or recollection, they are derived from sources to which I refer or recall and are true to the best of my knowledge and belief.

Legal and governance structure of the NHS in Scotland

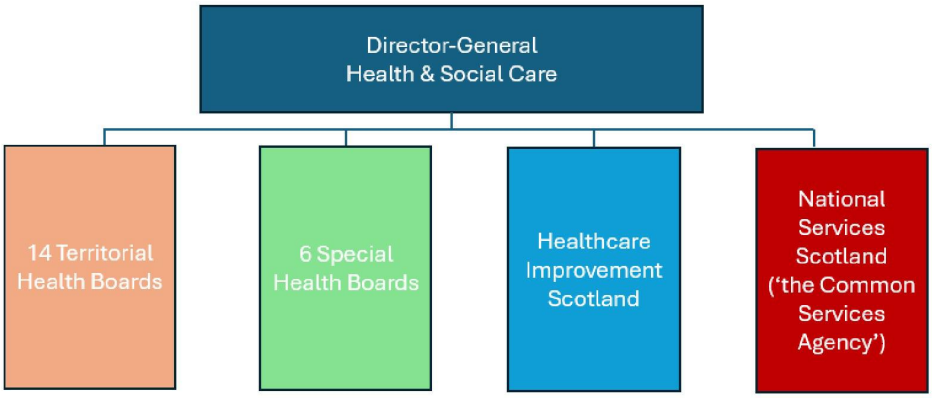
Health care

5. The National Health Service (Scotland) Act 1978 ("the 1978 Act") places a duty on the Cabinet Secretary to promote a comprehensive and integrated health service, designed to improve the physical and mental health and wellbeing of people as well as prevention, diagnosis and treatment of illness. The Cabinet Secretary may do anything which they consider is likely to assist in discharging that duty.

6. The Public Health etc. (Scotland) Act 2008 sets out the duties of Scottish Ministers, health boards and local authorities to continue to make provision to protect public health in Scotland. These are without prejudice to existing duties imposed on the Scottish Ministers and health boards in the 1978 Act and existing environmental health legislation.

7. Scotland has 14 geographical (also referred to as territorial) health boards and six non-geographical special boards, supported by the Common Services Agency (also known as NHS National Services Scotland ("NSS")) and Healthcare Improvement Scotland ("HIS"), that are accountable to the Scottish Government and Scottish Ministers. The special boards, HIS and NSS provide services at a national level.

8. In recognition of the whole-system nature of Scotland's population health challenges, Public Health Scotland ("PHS") was established on 01 April 2020. (Health Protection Scotland ("HPS") and Information Services Division were replaced when PHS became fully operational, with most of their functions being transferred into PHS.) PHS is jointly sponsored and has dual accountability to both the Scottish Government and to local government via the Convention of Scottish Local Authorities. This is a unique feature for a Scottish public body and requires a commitment to shared decision making, planning, and performance management in relation to the work of PHS.



9. NHS boards are legal entities established under the 1978 Act, with Healthcare Improvement Scotland later established under the Public Sector Reform (Scotland) Act 2010. They are required by legislation to promote the improvement of physical and mental health and the prevention, diagnosis and treatment of illness. To ensure the delivery of this, NHS boards are delegated responsibilities by the Cabinet Secretary to plan, commission and deliver healthcare services and take overall responsibility for the health and wellbeing of the communities they serve.

10. NHS boards' governance arrangements must be aligned to the Blueprint for Good Governance standards set by the Scottish Government, provided: [CL14/01 – INQ000147344). These focus on setting strategic direction, holding executives to account for delivery, managing risk, engaging with stakeholders and influencing organisational culture.

Social care

11. The Scottish Government sets out the overall strategic framework and legislative basis for the delivery of adult social care, while local authorities have a statutory responsibility to provide the services.

12. The Public Bodies (Joint Working) (Scotland) Act 2014 requires local authorities and NHS boards to work together through integration authorities to plan, commission and deliver services. In the majority of cases, this is achieved through an Integration Joint Board ("IJB"). IJBs are responsible for the planning of adult social care services, as well

as some health services and other functions. These services were previously managed separately by NHS boards and local authorities. In Scotland, adult social care is delivered by a wide range of partners including the public, independent and third sectors.

13. IJBs are jointly accountable to the relevant local authority and NHS board, through their voting membership and reporting to the public. As distinct legal entities, IJBs are corporately responsible and accountable for complying with all relevant law when carrying out their services. There are also a number of regulatory bodies with an interest in the health and social care sectors that will scrutinise the operations of IJBs.

The role of Director General of Health and Social Care and Chief Executive of NHS Scotland

14. In my role as Director General of Health and Social Care and Chief Executive of NHS Scotland, I essentially 'wear two hats'. In the role of Director General of Health and Social Care ("DGHSC"), I am the principal advisor to Scottish Ministers on matters relating to health and social care, and I am responsible for all the directorates that constitute the DG health and social care portfolio. I am accountable officer for the health and social care portfolio budget, so I'm responsible for providing advice to Scottish Ministers to support them in taking decisions about strategy and policy.

15. As Chief Executive of NHS Scotland ("Chief Executive NHSS"), my role is to ensure that Scottish Ministers' strategy and policy is implemented by NHS boards across Scotland. I achieve this by ensuring that planning guidance is issued to NHS boards, which they use to prepare their annual delivery plans. Those delivery plans, along with boards' financial plans, are reviewed to ensure that they are in line with strategy and policy. The Chief Operating Officer, who reports to me, is then responsible for ensuring that boards deliver against those plans. As accountable officer for the overall portfolio, I also designate the Chief Executives of the NHS territorial and special boards responsibilities as accountable officers for the budgets that are delegated to them.

NHS Scotland

16. NHS Scotland, which is comprised as described in paragraphs seven, eight and 17, is structured to enable Scottish Ministers to discharge their responsibilities under various legislation in terms of providing health services to the population of Scotland. My role comes from those Ministerial responsibilities.

Health boards

17. Scotland's 14 territorial boards are responsible for providing health services to their population within a geographical location. Scotland's special boards, including HIS and NSS (which are also referred to national boards although they are structured slightly differently to the special boards), provide services as a national level. The eight special and national boards are:

    i. the Scottish Ambulance Service;
    ii. NHS 24;
    iii. the Golden Jubilee National Hospital (otherwise known as the National Waiting Times Board);
    iv. NHS National Education Scotland;
    v. the State Hospital;
    vi. PHS;
    vii. NSS; and
    viii. HIS.

Procurement of PPE and other healthcare equipment by health boards

18. NSS was responsible for national PPE contracts in Scotland, and for supplying health boards through its national distribution centre. Other health boards were able to procure their own PPE where that was needed, and I understand that some of them did. Certainly at the time my understanding was that NSS was buying PPE for Scotland. NSS was also responsible for procurement of ventilators, LFT and PCR tests.

19. I don't have any knowledge as to how much other boards individually spent in total on PPE, nor on each type of PPE. That is not information that I would have had; if anybody had or has that, it's probably NSS. I don't recall ever being given information about the types of contracts that were being used by health boards, for example direct awards, call off from existing frameworks, or dynamic purchasing systems. An Audit Scotland briefing from June 2021 highlighted that during the period from March 2020 to April 2021, NSS awarded 78 contracts worth £340 million to companies providing PPE. The total spend on PPE during the pandemic was £446 million.

20. In terms of procurement of other healthcare equipment and supplies during the pandemic, the role of NSS before and during the pandemic was to procure a large

amount of healthcare equipment and supplies through national contracts, acting on behalf of all NHS boards. However, NHS boards will also procure on their own behalf, for example boards will procure locally for items such as food, and where there are no national contracts in place. NHS boards would therefore have also been involved in procurement during the pandemic.

21. I don't recall procurement by boards ever being raised with me as an issue. Where health boards were procuring their own goods locally, there was probably not much impact on those supply routes due to the pandemic.

22. I don't recall being given any information about termination of any contracts for PPE, ventilators, LFT and PCR tests or other healthcare equipment and supplies that boards had entered into, including in relation to fraud or lack of performance. Again, if anybody has that information it's probably NSS. Similarly, I don't know what proportion of PPE procured by NHS organisations in Scotland was considered unfit for use for any reason. I don't think any PPE was written off during the period between 01 January 2020 and 28 June 2022 ("the relevant period") as a result of fraud or being unusable, although I believe that some stock would have been written off due to passing the end of its shelf life.

23. I don't know what guidance or training was provided to procurement staff in NSS, which was the organisation responsible for the bulk of procurement, in relation to due diligence. More generally, we do have Counter Fraud Services within NHS Scotland, who provide online training modules. They're not particularly aimed at procurement, and are more general training that's available for all staff around anti-fraud measures. In relation to guidance and training that was provided about technical and regulatory specifications for PPE and medical devices, the PPE clinical advisory panel were the people who were looking at what PPE to use for different procedures and in different clinical settings, etc.. Their work was very much to support the procurement that NSS were doing.

Advice, assistance and support provided in relation to specification, procurement and stock management

24. I did not at any point during the relevant period give advice to Scottish Government or NSS in relation to the procurement of PPE, LFT or PCR tests. People from within the NHS in Scotland and clinical advisors in Scottish Government were involved in providing such advice.

25. I did provide assistance in relation to procurement of ventilators, in that during my time as Delivery Director for ICU Expansion I chaired the ICU Resilience and Support Group that met daily. That group looked at where we were in terms of ventilator supply capacity, where we needed ventilators, what was likely to be coming and where it should go. I personally lead the group, which consisted of:

- SG Director of ICU Expansion (initially John Connaghan and then me) who was leading on ICU capacity in NHS boards;
- Scottish Government Medical Devices and Legislation Unit within the CMO Directorate. An official provided Scottish Government policy support and co-ordination, and a clinical engineer provided technical expertise and intelligence gathering;
- Scottish Government Health Workforce ICU Clinical Advisor and Clinical Leadership Fellows, who provided clinical expertise and leadership;
- Scottish Critical Care Delivery Group Chair, Rory McKenzie (from NHS Lanarkshire), provided front line clinical expertise;
- NSS leads for ICU equipment; and
- NSS Assure (then known as Health Facilities Scotland ("HFS")), who provided technical expertise on medical gases.

26. I did not personally provide data around stocks of and demand for PPE, but I was aware that there was a daily call between health boards, NSS National Procurement and Scottish Government during which issues could be raised. I was also aware that NSS also set up the NHS Scotland Covid-19 PPE Supplies Portal to allow health board procurement teams to raise and track queries regarding PPE supplies. Scottish Government had no role in relation to that portal, but NSS will hold further information about it. It was a responsibility of NSS' to understand the data on stocks of and demand for PPE, and to be aware of adequacy and quality, etc., which is why they set up the daily call and then the portal.

27. NSS was responsible for procurement, storage and distribution of PPE, stockpile management, demand modelling and forward buy planning. NSS managed the storage and distribution of LFD stocks held in Scotland, and, with the UK Government, they led on demand modelling to support this, which was discussed in regular meetings with Scottish Government officials. This helped to ensure stocks ordered covered demand.

28. Stock management practice in relation to PPE was not 'on my radar' in the early part of the pandemic as I was not at that point in this job. From the point when I came into this job I was assured that NSS were, after some challenges in the early days, doing a pretty good job in terms of stockpile management and demand modelling. The PPE Unit within DG Health and Social Care was responsible for liaison with NSS with regard to ensuring that NSS had good stock management processes in place and for providing me with assurance that this was the case. I was not involved in the detail of the processes for this.

29. I did not personally provide any advice or input to the Scottish Government or NSS regarding technical specifications for PPE during the pandemic. We had a number of well-established groups to provide input and advice around that technical specification. Infection Prevention and Control ("IPC") guidance was issued by the Antimicrobial Resistance and Healthcare Association Infection ("ARHAI") team, which is part of NSS. NHS health board colleagues also provided input and advice through groups and panels such as the Expert and Clinical Oversight Group ("ECOG"), and the PPE Clinical Advisory Panel ("CAP"):

    - ECOG contained members from health boards. As of March 2022 its remit was to advise on clinically-related PPE matters and matters related to the wider occupational use of PPE. It considered and advised on innovations in PPE, and advised on any necessary work to appraise PPE for adoption within clinical and non-clinical settings.
    - CAP was mainly formed of clinical NHS staff, as well as NSS and Scottish Government PPE Team members. The CAP's main input was on innovation and changes to PPE (for example reusable products and changes to HPS guidance), what PPE to use and when in different procedures / clinical settings, any safety concerns and links to infection control procedures, and variation between use of PPE in different health boards.

30. I would not have been made aware of any relaxation or derogation from regulatory requirements for PPE during the pandemic. The people who would have needed to know about that would have been NSS, who were dealing with procurement. I recall that there was some PPE that was technically past its 'use by' date, and the Health and Safety Executive tested it and said that it was okay to use. That was happening at UK level, and those decisions were not made in Scotland.

31. I did not personally receive any concerns from NHS staff regarding adequacy of PPE, or the availability of different sizes of PPE. I was aware in March 2020 that there was significant e-mail traffic raising concerns about PPE availability, and that work was being done to establish the PPE mailbox and start responding to those concerns. The function of the mailbox was to give health and social care staff a point of contact if they did not have access to the PPE that they needed, or if they had other concerns regarding PPE supply. This covered acute, primary care, social care, and members of the public (including private contractors carrying out NHS functions).

32. Correspondence received into the mailbox was not categorised in terms of the issues that were raised, so it's not possible to provide a breakdown of what people were contacting us about.

33. I was not personally involved in considering how we should make alternative PPE such as respirator hoods available, although I was aware when issues started to emerge around difficulties for people from ethnic minorities and gender. I was aware that the teams took steps to try to understand what more could be done.

34. I was not in a position to ensure that equalities were taken into account in the procurement or specification process for PPE during the pandemic, because a lot of that work was done before I took up post as DGHSC and Chief Executive NHSS. I was aware of the contract that we agreed with Alpha Solway, and that enabling us to make sure that the specification of masks recognised the staff demographic within the health sector. Although I was aware of the work that was being done, I wasn't involved in any level of detail with it.

35. I didn't personally receive any concerns or feedback from NHS staff about shortages of or problems with LFT and PCR tests. I was aware, through discussions probably at directors' meetings, that health workforce concerns were raised at various points around the requirement for the regular testing of staff. I wouldn't have been aware of the detail, though.

36. I do remember there being discussions about changes in testing policy, for example whether there would be enough tests to manage when we went to daily testing of all care home workers. Calculations would be done to make sure we had enough tests, but I wasn't involved in the detail of any of that.

37. I didn't personally commission any reports that were relevant to PPE, or access to PPE, LFT and PCR tests during the pandemic. However, I was engaged with a review exercise carried out by KPMG for Scottish Government in June 2021, commissioned by my predecessor, which looked at lessons identified from the initial health and social care response to Covid-19 in Scotland, provided: [CL14/02 – INQ000147847].

38. The KPMG exercise concluded that the Scottish Government could have been better prepared. The report highlighted a lack of resource availability across the Public Health sector prior to the pandemic, as well as delays in workforce funding and decision making. It was also perceived within the Public Health sector that there was a lack of preparedness for pandemic PPE provision, including date checking PPE within the national stockpile and matching supply to workforce numbers. It also noted that many of the initial issues around the delivery of PPE to the NHS acute sector may have been improved by whole system preparedness planning. For example, it would have prevented uncertainties around of who was responsible for providing pandemic PPE to the social care sector.

39. Despite these challenges prior to the pandemic, the report also noted the quick and effective expansion of NSS services to provide PPE to the primary and social care sectors, and the increased efficiencies this centralisation brought to the distribution of the PPE. The development of the domestic PPE chain also bolstered the resilience of Scotland's PPE supply by mitigating the risk of relying on global supply chains, as well as creating jobs. Additionally, the successful repurposing of medical equipment (such as ventilators) was highlighted, as was the huge effort of the individuals who undertook this repurposing work. This bridged the gap until additional ventilators could be procured.

40. The key considerations identified for the future (relevant to the scope of Module 5) were as follows:

- The ability to rely on stockpiles of PPE has been critical to the success of some organisations but can also negatively impact on the wider response if stockpiles are used inefficiently. Collaborative working across sectors and organisations should mitigate this risk.
- Consideration into clear messaging so that less anxiety is felt by organisations in the delivery of services.

- Access to accurate, real-time data across organisations will provide a basis for more effective decision-making.

41. Other exercises were carried out, but the vast majority of those were likely commissioned by the PPE workstream. The main themes identified within these reviews were communication, collaboration, and the fundamental inadequacy of the traditional just-in-time PPE supply system in the context of the Covid-19 pandemic.

42. The KPMG report did make recommendations around the fact that we could have been better prepared and that we needed longer term solutions, particularly around PPE and supply to primary and social care. Those recommendations have fed into our work and been included in our future preparedness policy, which is part of Scottish Government's pandemic planning arrangements.

Distribution of PPE during the pandemic

43. I was not personally involved with and had no role in distribution of PPE across Scottish health and care settings; that was a matter for NSS.

44. NSS worked to ensure that NHS boards, primary care contractors and social care providers had proper access to PPE. Ensuring that contractors, locums and agency staff who were delivering NHS services in Scotland had access to PPE was the responsibility of employers.

45. Within the health and social care directorate in the early stages of the pandemic there was quite a lot of modelling being done about predicted infection rates, etc. We were working closely with the NSS to predict what demand was likely to be. I was aware that modelling work was going on, but I was not directly involved with any of it. Modelling was initially based on patient numbers and anticipating the number of patients with Covid-19. It then moved to a staff-based model in an effort to protect everybody who was working in services regardless of whether or not they were Covid-19 services.

Infection and prevention control guidance

46. I was not involved in any of the processes by which NHS Scotland, Public Health Scotland and equivalent bodies in England, Wales and Northern Ireland liaised and

worked together to draw up IPC guidance for use across the UK and in Scotland. I understand that, at the start of the pandemic, Scottish Government aligned with the rest of the UK in relation to IPC measures to reduce Covid-19 transmission. This ensured a consistent approach until further scientific evidence was available. That was then superseded with Scottish guidance.

47. Covid-19 guidance was developed using a variety of sources such as the World Health Organisation, alongside other international and UK clinical expertise, research reviews and contextual considerations.

48. I understand that ARHAI produced Scottish-specific IPC guidance, and undertook monthly rapid reviews of the evidence to assess IPC requirements for the prevention and management of Covid-19 in Scotland.

49. One example of where ARHAI guidance differed from UK Government IPC guidance was in undertaking a personal PPE risk assessment. Airborne precautions were not required when staff were performing aerosol-generating procedures ("AGPs") on patients in the low-risk pathway, provided the patient had no other infectious agent that could be transmitted via the droplet or airborne route. However, there was recognition that some staff remained anxious about performing AGPs on patients during the pandemic. Therefore when prevalence of Covid-19 was high and where staff had concerns about potential exposure, staff in Scotland could choose to wear an FFP3 respirator rather than a FRSM when performing an AGP on a patient in the low-risk pathway.

50. Although we did not ever run out of PPE, I was aware that there were issues around the availability of PPE. However, that was because of the logistics of getting it to the right place at the right time, and not because of IPC requirements changing. For example, as stated in the Module 5 DG Health and Social Care statement provided to the Inquiry on 21 October 2024, the PPE team were aware of logistical issues associated with supplying island communities that had the potential to affect PPE deliveries. One incident of delayed PPE deliveries to an island location was brought to the attention of the PPE team. This was due to an issue with ferries and was resolved by NSS.

51. As the professionals in this field, NSS lead on the logistical aspects of PPE distribution. The Health and Social Care Directorates were not given any cause to become directly involved in resolving individual challenges in the adequacy of PPE distribution caused by geographical or regional variations. Local contingency measures were in place to

mitigate this pre-pandemic, including, for island locations, holding levels of stock that were proportionally higher than on the mainland. Argyll and Bute Health and Social Care Partnership trialled using drones to deliver PPE in 2020 to help manage the logistical challenge of delivery to island sites and they would be better able to comment on the success of that trial. As NSS lead on the logistical aspects of PPE distribution, further information on PPE distribution may be sought from them.

52. The PPE mailbox, referenced in paragraph 31 of this statement, was established for health and social care staff to contact if they had concerns about PPE supply. All correspondence received in the mailbox was triaged by officials within the PPE Directorate and actioned depending on the content and the correspondent. For difficulties accessing PPE in Social Care, correspondents were referred to the Hub / triage system for assistance. As noted in the Module 5 DG Health and Social Care statement provided to the Inquiry on 21 October 2024, there was no requirement for correspondents to provide geographical information for their correspondence to be actioned. As a result, correspondence was not categorized according to geographic area, and geographical statistics were not recorded for retrospective analysis. Queries in relation to NHS supply were referred to the Single Points of Contact at the local Health Board.

53. I also remember there being a time when most of the UK was in a high level of restrictions but the Scottish islands were in a much, much lower level.

54. We were very aware of issues in care homes, and on 13 March 2020 Scottish Government issued advice for the nursing home and residential care sector, provided: [CL14/03 - INQ000147441].

Collaboration with other bodies

Public Health Scotland & Scottish Health Protection Network

55. During the relevant period, my first significant engagement with PHS was as sponsor director whilst I was Scottish Government's Director for Delivery for Test and Protect, between May and August in 2020. PHS were asked to check on whether people who had arrived from other countries were where they should be and were complying with quarantine requirements. PHS were not keen on doing that, because they wanted to give

public health guidance and not act as an enforcer, but they appreciated the public health requirement and agreed to take on this role.

56. I had a lot of engagement with PHS through the establishment of Test and Protect, and then as Director for delivery of the vaccinations programme. A lot of working groups for both of these projects involved PHS staff as well as the Scottish Health Protection Network, in particular in relation to vaccines and immunisations.

57. Since taking up post as DGHSC, I have engaged regularly with the Chief Executive and the Chair of PHS around what they're doing to support ministerial priorities. I don't really engage directly with the Scottish Health Protection network – that engagement was very much a feature of being involved in vaccinations.

Health and Social Care Scotland

58. Health and Social Care Scotland is a network for the leaders of Scotland's IJBs. I don't think I had any official contact with this Health and Social Care Scotland *per se*, but I certainly worked with chief officers of IJBs around both Test and Protect and the vaccinations programme.

59. Since taking up post as DGHSC, I have engaged fairly regularly with the Chief Officers group, which is part of Health and Social Care Scotland.

Health and safety, regulatory and other relevant bodies

60. I don't recall having any direct engagement with bodies such as the Health and Safety Executive or the Medicines and Healthcare Products Regulatory Agency, nor the General Medical Council ("GMC") or the Nursing and Midwifery Council ("NMC"). Scottish Government did work with the GMC and NMC to get people back on temporary registers, but I wasn't directly involved in that work. Scotland does not participate in or engage with the NHS Confederation.

61. I had no role in consulting the above-referred organisations regarding PPE.

62. In Scotland we work in a very collaborative way. In my roles as Director for Delivery for Test and Protect, Delivery Director for Vaccinations and Delivery Director for ICU Expansion, my job was very much about bringing together different organisations from

across Scotland to agree the best way forward and then implementing that. In my current role I continue to work to bring people together to collaborate to improve health and care services.

Ventilators

Scottish Government ICU Resilience and Support Group

63. During the pandemic, procurement of ICU equipment was undertaken by NSS, in collaboration with the Scottish Government ICU Resilience and Support Group (initially called the SG Covid Critical Care Support and Resilience Group). Between March and May 2020, this work was led by me as the Director for ICU Expansion.

64. The group started to meet from 15 March 2020, meeting at least twice daily in the initial months. The group included all the key organisations and clinical and technical expertise, to ensure a direct line of two-way engagement with NHS board critical care and clinical engineering leads who were also represented on the group. As noted above, membership included:

- SG Director of ICU Expansion (initially John Connaghan and then me) who was leading on ICU capacity in NHS boards;
- Scottish Government Medical Devices and Legislation Unit within the CMO Directorate. An official provided Scottish Government policy support and co-ordination, and a clinical engineer provided technical expertise and intelligence gathering;
- Scottish Government Health Workforce ICU Clinical Advisor and Clinical Leadership Fellows, who provided clinical expertise and leadership;
- Scottish Critical Care Delivery Group Chair, Rory McKenzie (from NHS Lanarkshire), provided front line clinical expertise;
- NSS leads for ICU equipment; and
- NSS Assure (then known as HFS), who provided technical expertise on medical gases.

65. As agreed by Scottish Ministers, this group provided central co-ordination and made decisions on the distribution of ICU equipment to NHS boards, using the latest intelligence available on the number of Covid-19 positive cases and number of ICU beds

to be available under ICU expansion. It facilitated co-ordination between all key NHS organisations: the Scottish Government itself (specifically the Performance and Delivery, Medical Devices Policy and Health Workforce divisions), NHS boards' ICU critical care and clinical engineering leads, NSS, and HFS. The group was responsible for identifying board ICU equipment requirements, board requests for ICU equipment and supporting boards with any issues in equipping their ICU beds. The group worked directly with board critical care and clinical engineering leads to deliver this.

66. The group led co-ordination and decisions on procurement and distribution to boards in the following ways:

- In the absence of a national medical equipment management system, manually gathering intelligence from the health boards on the number of ventilators they had on site, including their makes and models;
- Assessing the numbers of anaesthetic machines with integrated ventilators in NHS boards, including makes and models;
- Assessing the oxygen consumption required for ICU ventilators and anaesthetic machines, feeding into NSS Health Facilities who led on modelling of overall oxygen consumption;
- Ensuring all health boards had adequate supplies of ICU equipment and ventilator supporting equipment through the audit of health board equipment and agreed ICU escalation plans. This included syringe pumps, volumetric infusion pumps, patient monitors and specialised equipment such as Renal Replacement Therapy machines;
- Arranging for the clinical and technical assessment and evaluation of equipment of unfamiliar brands through the setting up of a facility in NHS Greater Glasgow and Clyde and reporting back to the ICU Resilience and Support Group on their conclusions;
- Using updates from the Scottish Intensive Care Audit Group on number of ICU cases in Level 3 ICU to ensure that boards had access to the equipment they needed; and
- Regular reporting to officials and Ministers on the position in relation to the supply and demand for ICU equipment and mitigations in place for the long lead times for ICU equipment due to the global demand.

ICU equipment modelling

67. The international standard for ICU response in a pandemic situation is to double ICU capacity. Accordingly, this was the capacity agreed with NHS boards as part of prior pandemic planning, and duly formed the starting point at the beginning of the Covid-19 response in Scotland. The modelling used for ICU equipment was the number of ICU beds to be provided by NHS boards. The number of ICU beds was set by Scottish Ministers, informed by the work of the ICU Resilience and Support Group.

68. From 09 March 2020, regular audits of the ICU equipment held by NHS boards were undertaken by the ICU Resilience and Support Group in order to assess the shortfall in ICU ventilators and equipment. This was the modelling that the ICU Resilience and Support Group used to inform the number of ICU ventilators and equipment required to be purchased by NSS. The first audit was completed on 15 March 2020, provided: [CL14/04-INQ000496411]. This initial audit provided the baseline position for boards, with the data used by the ICU Resilience and Support Group (including NSS) to inform the procurement of ICU equipment. This was ongoing work and discussed in daily meetings by the ICU Resilience and Support Group.

69. There was some modelling work undertaken by SG statisticians to which the ICU Resilience and Support Group provided input, but it did not provide any results that could be used as the results indicated levels of patients in hospital far beyond the maximum ICU capacity in NHS Scotland.

70. The audit of board ventilators was undertaken by a clinical engineer working in the Scottish Government Medical Devices Policy Unit, with input from the ICU Resilience and Support Group to ensure that the information required was collected. This work required clinical and technical expertise and knowledge input provided by the ICU Resilience and Support Group, which included the Chair of the NHS Board Critical Care Leads. Modelling was also provided by Scottish Government statisticians in March 2020 but that did not provide results that could be used by the ICU Resilience and Support Group. The audit of board ICU ventilators and equipment being procured by NSS was shared with Scottish Government statisticians for the modelling work they were undertaking.

71. For ICU ventilators and equipment, the focus was equipping up to the maximum surge Level 3 ICU beds to deliver double capacity of 406 beds (from a starting point of 173

beds) up to the maximum surge Level 3 ICU beds (714 beds), caveated by the ability to staff ICU beds. The approach adopted by the ICU Resilience and Support Group from the start was to take a human factors approach, i.e. purchasing and using only familiar brands or brands that NHS boards were using already where possible. The human factors approach ensured staff working under extreme pressure were not also having to learn to work with new specialised equipment and enabled the equipment to be utilised by boards post-Covid-19. Furthermore, there was not sufficient time available to train staff on new equipment or spare space to store it. I do not know if this approach differed from that taken in England or the other devolved nations and I cannot recall having any discussions about this.

72. In the context of ICU ventilators and equipment, there was no modelling to provide a range of different estimates on the basis of different possible variables. All modelling for ICU equipment was based on the policy position of increasing ICU capacity up to a maximum surge position of 714 ICU beds, and that maximum surge capacity directly informed the buying strategy for ICU ventilators and equipment.

Establishing the ventilator requirement in the early pandemic

73. Information on the number of ventilators in Scottish hospitals which could provide invasive ventilation at the start of the pandemic was only held by NHS boards and not centrally collected. The audit of NHS boards, completed on 15 March 2020, was undertaken to establish the number of ICU ventilators that existed within the NHS in Scotland. As at 15 March 2020, there were 363 adult ICU ventilators.

74. Similarly, an audit of NHS boards' anaesthetic machines with integrated ventilators was initially undertaken on 09 March 2020 by the Medical Devices Policy Unit. This indicated there were 686 anaesthetic machines in NHS boards, with further work undertaken to quality assure the data. As of 28 March 2020, there were 693 anaesthetic machines with integral ventilators available which could be used to supplement ICU ventilation, if required.

75. Non-invasive ventilators were outwith the scope of ICU equipment and the ICU Resilience and Support Group. An audit to specifically look at all non-invasive ventilation was not undertaken by Scottish Government. However, the 09 March 2020 audit referred to above confirmed that NHS boards had 105 sub-ICU (e.g. High Dependency Unit) ventilators that were essentially non-invasive ventilators with limited invasive modes,

such as Philips Trilogy 202 and V60. Upon further investigation, it was established that NHS boards had 124 such devices. The 09 March 2020 audit collected some limited data on continuous positive airway pressure (CPAP) machines but not all boards returned this data. A total of 1,005 CPAP machines were held by NSS for distribution to NHS boards as required. Approximately 200 CPAP machines were provided from the Department of Health and Social Care ("DHSC") stockpile and, as noted, approximately 500 CPAP machines were procured by NSS (who will hold precise numbers).

76. As noted in the Module 5 DG Health and Social Care statement provided to the Inquiry on 21 October 2024, the auditing of Health Board ICU ventilators was one of the challenges experienced in relation to ICU equipment. The auditing needed to be undertaken manually in the absence of a national medical equipment management system, including cleansing (i.e. fixing or removing incorrect, corrupted, incorrectly formatted, duplicate, or incomplete data) and harmonising the data to account for differences between boards, as well as errors. As a key part of learning from Covid-19, a national Medical Equipment Management System Project is currently being implemented. Once established, this will provide a 'Once for Scotland' joined up data view for the operational and strategic management of the medical equipment inventory across Scotland. This project includes Data Cleansing and Data Harmonisation of Medical Equipment by all territorial NHS Boards to ensure data quality.

77. The policy position for the number of ICU beds was used to assess the shortfall of ICU ventilators and equipment that was available to NHS boards. This was monitored daily by the ICU Resilience and Support Group to ensure that NHS boards had the ICU ventilators and equipment they needed to provide intensive care. The monitoring of boards' ICU requirements included NHS board access to the whole ICU kit needed for an ICU bed. The policy position for ICU beds was for a maximum of 714 ICU beds, subject to staffing being available, so sourcing of ICU equipment was planned by the ICU Resilience and Support Group to meet this requirement.

78. ICU equipment was also secured on loan from the DHSC. While most of the DHSC stockpile for ICU were not preferred brands / specifications, NHS Scotland benefitted from a range of medical equipment that helped to bolster resilience across the service. NSS hold a list of the equipment provided to NHS boards. Deliveries were made directly to NHS boards from the DHSC stockpile warehouse to ensure that these were delivered as quickly as possible, by arrangement with NSS.

79. HFS led on oxygen resilience and were part of the ICU Resilience and Support Group for ICU requirements. The ICU Resilience and Support Group provided clinical engineering input to calculations on oxygen and medical air consumption in ICU to ensure oxygen resilience in ICU. The work undertaken to repurpose anaesthetic machines from oxygen to air driven was part of the effort to conserve oxygen supplies.

80. The total additional number of ventilators needed in order to provide the maximum ICU beds of 714 was 527. A small number of ventilators from the DHSC stockpile were obtained through this route with NSS procuring the balance needed. For the DHSC procurement, Scottish Government was not directly involved. However, the devolved administrations and Crown Dependencies were regularly kept updated on the DHSC procurement progress through regular meetings.

Contracts and spend

81. I was not directly involved in awarding contracts to ventilator manufacturers during the pandemic. NSS procured ventilators during the pandemic. It is my understanding that some of that procurement may have been via direct awards due to timing issues. Decisions about whether to use direct awards were NSS' responsibility.

82. I understand that the spend on procurement of ventilators formed part of the overall funding that NSS sought from Scottish Government. Capital requested by NSS in relation to Covid-19 was approximately £24m for the financial year (2020-21) during which all ventilators were procured. NSS would be able to provide a more specific sum.

Specification, quality and availability

83. Scottish Government didn't collaborate with academic institutions or regulators in order to produce advice or guidance about the number or type of ventilators needed. We followed World Health Organisation guidance to double capacity, and ultimately, based on our modelling about the likely requirement for ICU beds, advised the Cabinet Secretary that we should aim to quadruple capacity, which she accepted. We tried to procure ventilators of the type that were already in use in the NHS in Scotland so that staff were familiar with them. There was no need to consult academics about technical requirements, as we had critical care and clinical engineering leads in Scotland who provided that advice, and had resources such as a Greater Glasgow and Clyde site where ventilators could be tested before use.

84. No concerns were raised with me about the quality and safety of ventilators procured for use in the NHS in Scotland.

85. As far as I am aware, during the pandemic there was never a patient who needed a ventilator but was not able to get access to one.

Lessons Learned

86. Lessons identified through the ICU ventilator work were captured by a short-life working group ("SLWG") on the legacy of ICU equipment. This group was set up by John Connaghan, who was my predecessor as Director for ICU Expansion, to explore and develop a strategy for the short and medium-to-long term management of medical equipment procured as part of the Covid-19 expansion. The group included NHS board critical care and clinical engineering leads, plus representatives from SG and NSS. The first legacy report, commissioned by John, was completed in June 2020; the second, commissioned by me, was completed in March 2021. Both reports were agreed and supported by the then Cabinet Secretary. The recommendations from those reports, their current status, and summaries of actions taken in relation to each recommendation can be found in the following tables.

Legacy Report 1 (Strategy for allocation and distribution)		
Recommendation	**Status as at 09 Oct 2024**	**Comment**
1. For planning purposes as part of future pandemic planning, a decision should be made on the maximum surge capacity to be maintained by NHS Scotland. This may be retained at over 700 beds, or an alternative approach adopted.	Completed	Agreement was obtained from the then Cabinet Secretary in August 2023 to reduce surge capacity to 406 ICU beds (i.e. double baseline ICU capacity). This is in line with the maximum number of ICU beds that were required during the peak of the Covid-19 pandemic.
2. Minimising variation and limiting manufacturer of each device to a maximum of two per board. Setting up of a process to exchange medical devices where feasible following discussions with critical care leads (for example, exchanging ventilators that were nearing the end of their useful life for new ones).	Completed	During Covid-19 measures were introduced that meant NHS boards had two manufacturers of major equipment such as ventilators, with provisions made to provide staff training on any new or unfamiliar equipment. A process was introduced whereby NSS National Procurement facilitated the swapping of ventilators. Ventilators coming to the end of their support lifespan were also swapped out with new models. There was an exception to the two manufacturer approach in the larger health boards (NHS Lothian and NHS Greater Glasgow & Clyde); in these boards, up to three manufacturers were retained within the health board.
3. Retention of equipment to support double baseline capacity within NHS boards to be incorporated into	Completed	All NHS boards in Scotland were already equipped to provide double ICU capacity at the time of the report, and the necessary

capital asset registers as part of NHS board readiness and local contingency planning.		accounting treatment and asset management has now been completed.
4. Exploration and establishment of a central storage facility which holds a National Medical Equipment stockpile and incorporates servicing of the devices as well as a training facility for equipment technicians and clinicians.	No longer required	NSS stockholdings were moved to larger storage facilities, but this is no longer required as the NSS central stockpile is being decommissioned and equipment being distributed to NHS boards as part of their replacement programmes.
5. Discussions within Scottish Government Health Finance and NHS boards about the financial implications of maintaining both board-held and centrally-managed equipment stockpiles.	Completed	Board-held double ICU equipment: the equipment held has been absorbed into boards' capital asset registers, with the recurring maintenance cost of the equipment held within the boards also subsumed into their costs. NSS stockpile: maintenance costs were covered by SG and the NSS stockpile is now being distributed to boards as part of their replacement programmes.
6. Commitment from NHS boards to continued workforce resilience through ongoing training of core and support staff.	Completed	This recommendation was made on the basis that delivering 714 ICU beds in extreme circumstances would require the use of some unfamiliar infusion pumps. As all boards have the required infusion pumps and other equipment to double ICU capacity, this commitment is being delivered through routine training.
7. Priority and support given to the urgent development of a National Medical Equipment Management	Implementation due to be	The National Medical Equipment Management System is due to be completed in 2025-26, subject to funding. The project has so far delivered:

system that is overseen nationally but managed locally (i.e. at board level).	completed in 2025-26	- all boards using a Medical Equipment Management System; - data harmonisation and cleansing; and - Medical Equipment User Group sharing best practice and knowledge to better utilise local Medical Equipment Management Systems. The final part of the project is deliver the technical solution to integrate the board data (i.e. make a national overview available across the NHS in Scotland and to Scottish Government). Subject to funding this will be completed during 2025-26.
8. Improvements to IT systems that support monitoring of ICU escalation and strategic and tactical decision making around levels required, particularly the SICSAG Wardwatcher.	Ongoing	This remains a priority for the DG HSC. Work will be done with digital colleagues to progress this forward.

Legacy Report 2 (Framework for longer term management of Scottish ICU Stockpile)		
Recommendation	**Status as at 09 Oct 2024**	**Comment**
1. Critical to the success of the central storage stockpile is an appropriate facility. Support should be	Completed	NSS took on a larger warehouse.

given to secure a large storage facility with the ability to service equipment as well as a training base.		The stockpile is now being decommissioned and distributed to health boards as part of their replacement programmes.
2. Following a review of the policy position of quadruple expansion of ICU beds to cope with maximum surge, any surplus equipment should be considered for use in: replacement plans for NHS health boards; a new training base within the storage facility; supporting the SG Global Citizenship commitments via the NHS Scotland Global Citizenship Programme and International Development departments.	Completed	NSS central ICU stockpile is now being decommissioned and is being distributed in a number of ways, including to boards as part of their replacement programmes, to academic institutions, and through Global Citizenship equipment donations that have been made to India, Nepal, Zambia, Kids OR and Ukraine.
3. NHS Services Scotland (NSS) should be commissioned to lead the long-term management of the central storage stockpile by virtue of its logistics and procurement experience.	Closed	Now closed as the NSS central ICU stockpile is being de-commissioned and equipment being distributed to boards as part of their replacement programmes.
4. The Medical Physics Network, in conjunction with the Scottish Technical Manager's Group, should also be commissioned to draw up detailed maintenance protocols for the equipment held within the stockpile, in liaison with the Medical Devices and Legislation Unit in SG. This should include a framework for staffing requirements to achieve this.	Closed	Now closed as the NSS central ICU stockpile is being de-commissioned and equipment being distributed to Boards as part of their replacement programmes.

5. Trigger points for NHS health boards gaining access to the central stockpile should be agreed at SG ICU Support and Resilience Group along with the Scottish Critical Care Delivery Group.	Completed	NHS boards had continued to access to the NSS ICU stockpile. This is now closed as the NSS central ICU stockpile is being de-commissioned and equipment being distributed to boards as part of their replacement programmes.
6. Further formal review is carried out in September 2021.	Completed	Recommendations have been regularly reviewed. A revised policy position on ICU escalation during a pandemic was agreed (i.e. double the baseline) by the then Cabinet Secretary in 2023.

Statement of Truth

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

Signed: **Personal Data**

Dated: 30 October 2024