Witness Statement of Stephen Mathieu

Introduction

1. This statement is prepared on behalf of the Intensive Care Society ("the Society") in response to a Rule 9 request received from the UK Covid-19 Inquiry ("the Inquiry"). This statement aims to respond to the questions raised by the Inquiry in its Rule 9 request, which are relevant to Module 3 of the Inquiry. The Inquiry has identified that the relevant period for the purpose of this statement is the period between 1 March 2020 to 28 June 2022 ("the Relevant Period").

2. Intensive Care Unit ("ICU") staffing was already an issue in UK ICUs before the pandemic. The sudden and steep rise in ICU demand experienced in many UK regions during the Covid-19 pandemic (together with high viral infectivity, and the fact that its optimal management was not yet understood) created substantial challenges for the intensive care community. For example, there were insufficient trained and experienced ICU staff to provide the normal quality of care once extra beds were created. ICU patients were being managed in 'new' beds, with lower numbers of staff (many without ICU training) and with more limited equipment, often in general ward or operating theatre areas. This meant that those without specialist ICU training were redeployed from other parts of the NHS. In addition, there was limited or no capacity to transfer patients between units. There were concerns about equipment supply, resource, staff physical and mental wellbeing and a number of other factors. This statement documents the nature of those challenges and how the intensive care community and the Society responded. Furthermore, it outlines the lessons that the Society believes can be learned and applied in preparation for future pandemics.

3. The Society is committed to assisting the Inquiry and to providing any information or documentation that it can which is relevant to the scope identified by the Inquiry. Due to the size of The Society's undertaking with regard to providing assistance to those involved with the provision of intensive care during the Covid-19 pandemic, and because of personnel changes over the Relevant Period, I have been assisted by others from the Society, and the Society's external lawyers, in the gathering of

information for and the preparation of this statement. The information contained herein is therefore provided from the Society as an organisation and presented by myself as the current President of the Society and it is true to the best of my knowledge and belief.

4. The Covid-19 pandemic was the most challenging period in the Society's history, both for the organisation, for its members and for all of those working in intensive care during that period. Each individual working in intensive care will of course have had a different experience in relation to the issues raised by the Inquiry because Covid-19 was impacting on units, NHS provider Trusts and regions at different times and to different extents. This is in part due to regional variations in case numbers and population demographics (e.g. race, sex and comorbidities altered the risk of critical illness), but also because units differ in size, staffing, and usual case-mix, as well as in whether they perform tertiary or quaternary specialist roles (and the nature of those roles). The Society is therefore unable to speak comprehensively to the full range of individual experiences; however, we have endeavoured to gather information for the Inquiry based on the data, minutes and information available to us. Where we have felt unable to provide a response we have explained why.

5. The Society does not represent one Trust, or one profession. It represents all of those who work in or have an interest in intensive care. As a Society we were, over the Relevant Period, analysing and considering every facet of intensive care, with the input of experts where required. We worked with clinicians, academics, tech experts, research experts, ethics experts and many more to consider everything from rehabilitation to clinical trials. For that reason the information in this statement and the accompanying documentation is wide ranging and we have done our best to highlight the areas that fall within the scope of the Inquiry's Rule 9 request.

6. I would like to say at the outset that the impact on the intensive care sector and its people has been, and continues to be, devastating.

My Background

7. In my clinical role, I am a Consultant in Critical Care at Portsmouth Hospitals University NHS Trust and the Divisional Director for Clinical Delivery (which includes Critical Care, Anaesthetics, Theatres, Clinical Engineering, Radiology, Pharmacy, Therapies, Blood Sciences and Pathology). I was previously the Clinical Director of Critical Care at the same Trust.

8. I have been in the position of President of the Society since December 2022, when I took over from my predecessor, Stephen Webb who was President during 2021 and most of 2022, and before that the President was Ganesh Suntharalingam who was in the second year of his term as President in 2020. President of the Society is a role to which I am required to dedicate a minimum of 6 hours a week on a voluntary and unpaid basis. In my role I sit as Chair of the Trustee Board and President of the Council. As I was not President of the Society during the Relevant Period, I have sought significant input from colleagues within the Society to compile this statement.

9. I held the role of President Elect from December 2021 until December 2022. My previous roles for the Society include Congress Director for State of the Art (January 2018 to December 2021), Honorary Treasurer (December 2019 to December 2021) and Council Member (January 2016 to January 2019).

Role, Function and Aims of the Society

10. The Society was founded in 1970 and is the oldest intensive care professional body and membership organisation in the world. The Society is a registered charity. At the outset of the Covid-19 pandemic the Society employed only 7 people, however, now it employs 18.

11. The delivery of intensive care is a multifaceted and intensely multi-professional endeavour, involving highly specialist medical and nursing staff, pharmacists, psychologists, physiotherapists, speech and language therapists, dietitians, occupational therapists, advanced practitioners in critical care and other allied healthcare professionals. All of these professions are represented among our 3500+ members.

12. The Society's mission is to be the voice of the multi-professional intensive care community, their patients and their loved ones, and together to advance and promote the best quality care, safety and research.

13. For over 50 years the Society has supported the intensive care community to ensure they have all the tools they need to deliver the highest quality of care to the sickest of patients in UK hospitals. The Society's Articles of Association (Exhibit SM/1 -

INQ000395307) set out our purpose, how we are governed, owned and how we conduct our work.

14. In summary, the way that the Society supports the intensive care community is by:

- Providing education - we organise and deliver an annual 4 day multi stream educational congress (known as State of the Art) organised by our Programme Committee and Events team. We also host a range of educational events throughout the year, ranging from free to attend hour long webinars to full day virtual and in person Study Days organised by our Education Committee and learning team.

- Providing accreditation - we manage a national accreditation programme for intensive care professionals to attain competence in Focussed Ultrasound in Intensive Care across a range of subjects including heart, lung, abdomen, vascular and paediatrics. We also aim to educate and inform the general public, and patients and their carers/families.

- Producing guidance and standards - the Society produces guidance documents for use in intensive care settings. Our guidelines are reviewed and coordinated by our Standards and Guidelines Committee and our Society team to guide intensive care practice. During the pandemic the Standards and Guidelines Committee fed into the Society's National Emergency Critical Care Committee ("NECCC") along with its sub-groups. Further details about the establishment of the NECCC and the aims and functions of this committee are outlined below at paragraphs 32-77. The Executive Committee of the Society (the most senior clinical trustees) made decisions about the standards and guidelines we developed as well as those which were developed by other specialty groups and which we were invited to review and endorse.

- Developing policy statements - we regularly publish both policy and media statements, and work with media to help disseminate our members' message to the public. Policy statements are prepared on important topics for the intensive care community including, by way of examples, industrial action, workforce diversity in medicine, and matters of clinical significance. During the pandemic, the

Society released a number of policy and media statements which will be explored further below.

- Coordination of critical care research – during the pandemic the Society had six Directors of Research. There are now five. Each of the Directors of Research play a vital role in the advancement of intensive care and are currently actively involved in research (including research related to Covid-19). We also awarded a range of financial grants on a competitive basis to other clinical researchers focussed on Covid-19 research which will be outlined in more detail below.

- National awards – the Society runs a competitive programme to award both financial grants for research projects and non-financial awards in recognition of exceptional practice.

15. The Society is governed by a Trustee Board made up of four clinical professionals elected by the Society's Council, one past Council member and three independent Lay Trustees. Our Trustee Board is chaired by myself and supported by our Chief Executive. The Trustee Board meets at least four times a year where they discuss and make decisions about strategy and performance. At the outset of the pandemic (in March 2020) the Trustee Board met three times on an extraordinary basis to consider the financial and strategic impact of Covid-19. I am elected both to the dual role of President of the Council of the Society, and Chair of the Trustee Board.

16. While our Trustee Board is charged with the strategy, performance and assurance of the activities of the Society, our Council is responsible for the clinical and professional aspects surrounding intensive care. The elected Council and our seven elected Professional Advisory Groups highlights key issues and provides clear advice for the Trustee Board to consider and make strategic decisions about the direction for the Society to ensure that we are supporting the intensive care community in the right way.

17. Our Council members are made up of 22 nationally elected representatives from across the multi-professional intensive care team, including consultants, junior doctors, SAS doctors, nurses, advanced practitioners in critical care, physiotherapists, dietitians and the wider allied health professionals. The Council also has three specialist advisors: the Editor-in-Chief of our international peer review journal (the Journal of the Intensive Care Society - JICS); the Programme Director for our annual 'State of the Art' congress (SOA); and the Chair of our national committee for Focussed Ultrasound in Intensive

Care. Our Council is chaired by myself and supported by our Chief Executive. Council meetings are held every quarter, and an Annual Members Meeting takes place in early December each year.

18. The Society invites likeminded organisations, referred to as Strategic Partners, to its Council meetings in order to facilitate the sharing of information, ideas and resources across intensive care. The Society works with Strategic Partners where it is in the best interests of our beneficiaries, and where those organisations meet our charitable objectives and strategic vision. A full list of the Society's 21 Strategic Partners can be found in the Trustee's Annual Report but by way of examples for the Inquiry, these include:

    a. Welsh Intensive Care Society ("WICS");
    b. Scottish Intensive Care Society ("SICS");
    c. Northern Ireland Intensive Care Society ("NIICS");
    d. UK Critical Care Nursing Alliance;
    e. British Association of Critical Care Nurses;
    f. Paediatric Critical Care Society;
    g. European Society of Intensive Care Medicine;
    h. Intensive Care National Audit and Research Centre;
    i. Faculty of Intensive Care Medicine ("FICM"); and,
    j. Association of Anaesthetists.

19. The Society has a collaborative relationship with WICS, SICS and NIICS and, as above, invites a representative of each organisation to attend its Council meetings. In addition, if the Society was to produce guidance on a particular topic (both before and during the Relevant Period) it would seek to get that guidance endorsed by WICS, SICS and NIICS. Therefore, whilst each of the devolved nations has its own intensive care society, the organisations work together for a unified approach across the UK. The Society was able to react quickly to this rapidly developing surge in cases of a novel disease caused by a novel virus, because of the open approach to knowledge sharing that was clear from those in intensive care from the outset. Given the way that the Society worked closely with the intensive care societies of the devolved nations during Covid-19, it is not practicable to answer each question posed by the Inquiry separately for each of England, Wales, Scotland and Northern Ireland. Instead, we provide this statement from the Society as a whole, with input from senior personnel within the Society, which seeks to have a UK-wide reach and influence in intensive care. The

Presidents of the Societies of the devolved nations have not been consulted in the preparation of this statement.

20. During the Relevant Period, the Society also had an international reach - the Society worked with the devolved nations, Europe and the World to share information and learn from each other's experiences. The Society believes from its discussions with other nations at this time that the reason the UK was able to react quickly to the developing situation is because of being able to utilise existing structures and organisations such as the National Health Service and the Society, and because it was able to utilise the UK's research infrastructure and its exceptional clinical-academic base across university teams and industry.

21. In terms of the Society's membership, any person working in intensive care can become a member of the Society by payment of a membership subscription of an amount between £329 (for a working consultant) and £42 for a student. It is open to everyone with an interest in intensive care, and in fact the requirement for membership during the pandemic was relaxed by the Society, so as to enable access for everyone to the Society's knowledge at that critical time. See further below.

22. Our elected Council and clinical leadership work for the NHS but also volunteer (unpaid) to work for the Society. As a key independent professional body we were, and remain, free to speak on behalf of staff and patients for the public benefit without fear or favour.

Covid-19 – the outset of the pandemic

23. The Society's Executive Committee, elected Council, and expert members were a key voice in speaking for the ICU community and our critically ill patients during Covid-19, supporting public understanding of critical care and capacity issues, providing professional guidance and interacting extensively with the NHS and the Department of Health and Social Care ("DHSC") when relevant.

24. The Society acted immediately upon the outbreak of the pandemic to work together with other organisations to, amongst other things, educate and inform the public, develop guidance, create open lines of communication for those working in critical care, enable free flowing information and ideas, and perform essential research activity (this leading to the first international identification of effective treatments). Because the

Society was made up of a collegiate group of subject expert academics (many of international standing) and national leads, it was able to create a forum for agile identification of important issues and of best practice, and for rapid sharing of this knowledge such that an effective response to the pandemic could be formulated very quickly. This was facilitated also in part by the Government's prompt action to remove unnecessary bureaucratic processes around research and data sharing so that agile working and decision making could be achieved. Where possible, and where there was expert consensus, written guidance was also produced (see further below). Given that Covid-19 was impacting units and regions at different times and to different degrees, the Society considered that instant, open and continuous communication was key in the sharing of experiences across the sector, and to learning from them.

25. From March 2020, ICUs were not only dealing with their routine baseload of critically ill patients, but also those seriously ill with Covid-19. As a consequence, the volume of patients to be cared for rose steeply, as did overall severity of illness of the patients. The disease was new, and its management not fully understood (at least at the start). Logistic complications resulted from the need to protect staff and 'non-covid' patients from infection, how to staff the expanded beds number of beds in use and how to maintain supplies of essential drugs and equipment.

26. Many of those in ICUs were on ventilators, and these patients require 1:1 care. Capacity was stretched. By way of illustrative example, my Trust normally has a maximum physical capacity of 24 beds (funded and staffed for 19 level 3 patients; the sickest patients such as those on ventilators). At its peak which in my Trust was at the end of January 2021, all 24 beds were full, and we were caring for an additional 37 intensive care patients (321% bed occupancy relative to baseline) elsewhere in the hospital in ad hoc 'ICU beds'. My Trust expanded beyond its 24 beds by using additional beds in a contiguous ward (10 bedded and built with ICU specifications for future planned growth in demand) and across two geographically separate theatre recovery areas. This all happened without an increase in appropriately trained staff but reliant on existing staff working many more shifts and using staff re-deployed from other areas, with the best skills available, to help. We also required dedicated proning, vascular access and family liaison teams. My Trust achieved this using a combination of ICU staff working additional and very flexible shift patterns, as well as theatre staff, nurses, operating department practitioners, anaesthetists and other non-critical care specialties supporting. By way of example, my Trust was utilising radiology clinicians for line insertion, and other clinical teams for assistance with proning manoeuvres. At

the same time, the Respiratory Support Unit was also over their capacity caring for patients with Covid-19. Other Trusts were of course facing the same issues at different times. Further discussion on capacity is presented below in paragraphs 126 to 144.

27. The Society utilised its reach and technology to provide those working in ICUs (as well as the general public) with accurate and up to date information, and also to support efforts to dispel myths and dismiss misinformation. The Society used various methods of communication including all of its communication channels: twitter – now X (@ics_updates – 35, 682 followers), WhatsApp (private group), Facebook posts (Intensive Care Society – 8,500 followers), LinkedIn posts (Intensive Care Society – 7,000 followers), direct mailings to our membership contacts database circa 7,500, weblinks and documents, and mass media (print, broadcast media such as podcasts, radio and TV programming). It used social media to publicise updates and information, and to enable fast, prompt and speedy communications in the fast-changing Covid-19 environment. Over the Relevant Period, representatives of the Society performed around 400 press engagements with a view to engaging with the public on critical issues such as NHS capacity, surges and wellbeing. We also engaged with specialised media stations and organisations to promote NHS England's vaccine campaign and increase uptake by members of the public from ethnic minority backgrounds.

28. Between 1 March 2020 and 30 June 2020 alone, the Society's website had been visited 406,356 times, and its guidance on 'proning' patients (i.e. placing them face down to improve gas exchange, whether breathing for themselves or attached to a breathing machine - see below) had been downloaded from the website nationally and internationally 5,977 times. The Society's wellbeing pages on social media (twitter and Facebook) had been viewed 652,136 times in that 3 month period.

29. Immediate steps were taken by the Society including setting up a WhatsApp group for UK Covid-19 clinical leads to facilitate immediate sharing of troubleshooting, support, guidance, and situation reports in rapidly changing, and novel, circumstances. The Society set up the group and, on 7 March 2020, invited FICM, the Critical Care Operational Delivery Networks and the Presidents of the Welsh, Northern Irish and Scottish Intensive Care Societies to join. Within 24 hours 187 people had joined and, within 48 hours, it had reached WhatsApp's maximum capacity. The Society developed Rules of Engagement for those who wished to join the WhatsApp group (Exhibit SM/2 - INQ000395318) including that no patient identifiable information was to be shared and that the group was not meant to replace national guidance.

30. Normally, only the circa 3,000 paid subscribing Society members can access the Society's information, training and communications. Early in the pandemic, the Society made the strategic decision to remove the barrier such that all professionals could have such access, regardless of whether they had paid for membership or not (see Trustee Board minutes 16 June 2020). Therefore, there was no differentiation between members and non-members over the Relevant Period, the Society opening its doors to the 30,000+ people now working in ICUs nationally. The Society's resources were also used by ICU professionals internationally. The Inquiry has requested that the Society provides details in this statement of any concerns raised by members of the Society. Due to the removal of the membership requirement over the Relevant Period, the Society was not limited to information received just from its members, but the inclusivity described meant that information was received from across the intensive care spectrum, and all this information has been included for the Inquiry's consideration either in this statement or in the documents enclosed to it.

31. In addition, the Society immediately established the NECCC, a cross-organisational multi-professional group to create a unified national approach to managing Covid-19 in UK intensive care settings. NECCC held weekly meetings, commencing on 18 March 2020 and it was a forum open to anybody involved in intensive care work. Specific 'speaking slots' were given to senior members of the Society, and to leaders from key organisations such as DHSC, NHS England, Public Health England, National Institute for Health and Care Research, Royal College of Nursing and the Paediatric Intensive Care Society. Critical Care Psychologists also spoke, when available, to discuss staff psychological wellbeing, which was a significant concern. This was, in my view, a valuable and critical forum which quickly mobilised leaders for the benefit of intensive care units across the UK and beyond.

NECCC

32. NECCC allowed upwards of 100 organisations to access valuable Covid-19 updates from these key persons; it enabled the sharing of information and allowed participants to agree actions to quickly progress and develop research, guidance, data collation, training and monitoring so that the pandemic could be better managed in intensive care settings. It also created a space for any concerns to be raised by anyone across intensive care nationally.

33. The NECCC Terms of Reference can be located at Exhibit SM/3 - INQ000395329. The co-chairs of NECCC were Hugh Montgomery (at the time an elected member of Council) and Ganesh Suntharalingam (at the time President and then immediate Past President) on behalf of the Society. Although I was aware of the great work that NECCC was doing, and I was alive to the guidance and learnings arising from the sharing of information, I did not attend the NECCC meetings due to my clinical demands at that time, nor did I have an active involvement in running NECCC. Accordingly, the matters addressed within this section in respect of NECCC have been co-authored by myself and Professor Hugh Montgomery OBE. Due to his position as co-chair of NECCC, and his significant involvement, Professor Hugh Montgomery OBE has developed much of this section and he is happy to assist the Inquiry further should more information be required.

34. There was no charge or fee for joining, it was free to anybody who attended. Its aims were to:

    a. Act as a single point of contact to and from a broad base of clinical, academic, government and stakeholders;
    b. Ensure that cohesive action was taken and prevent inadvertent hampering of the efforts of others;
    c. Address urgent gaps in guidance in a timely way; and,
    d. Spread awareness about existing work to avoid duplication and maximise impact.

35. The weekly meetings were non-hierarchical and open to all interested parties – both individuals and institutions. The Society invited experts from across the spectrum of healthcare, research, education, NHS England, Public Health England, healthcare professional bodies (including the devolved nations and both public and private sector digital solutions and other providers). DHSC, National Institute for Health and Care Research ("NIHR") and NHS senior staff attended, allowing highly successful two-way communication, such that policy and guidance could be both shaped and supported. The meetings started off weekly and remained so for some time during the Relevant Period, eventually becoming less frequent as the pandemic progressed, but becoming more frequent again during periods of Covid-19 surges/waves. The NECCC meetings were simply a forum that was created by the Society for all of those involved in Intensive Care to be able to communicate openly and discuss developments, ideas and strategies for dealing with the pandemic. It was an open discussion forum, and therefore the ideas or proposals discussed in that forum and identified in the minutes

represent a discussion that was had at that particular moment in time, but the pandemic was quickly changing and therefore NECCC was required to be dynamic and to change course as the pandemic did. The issues discussed do not necessarily represent the view of the Society – the minutes note the views and/or experiences of the person contributing to that part of the meeting. If a particular idea had support, then it was noted as an action to be taken forward by the most suitable organisation. That could have been the NHS, the Society, a research facility or any other person who could assist.

36. The first meeting of NECCC was held by video conference on Wednesday 18th March 2020, five days prior to the Prime Minister's announcement of the first lockdown, with over 40 stakeholders participating from across the critical care multi-professional workforce and beyond.

37. In attendance at that first meeting were 23 members of the Society, senior Society staff plus representatives from:

    a. National Strategic Partners including: Lancashire & South Cumbria Critical Care and Major Trauma Network, National Medical Leads Group for the Critical Care Networks of England, Wales and Northern Ireland, WICS, SICS, NIICS, the UK Critical Care Nursing Alliance, the British Association of Critical Care Nurses, the Paediatric Intensive Care Society, the European Society of Intensive Care Medicine, the Intensive Care National Audit and Research Centre, FICM, the Association of Anaesthetists of Great Britain and Ireland.

    b. Organisations/individuals providing additional expertise, including: NHS England, National Institute of Health and Care, a sepsis expert, Royal College of Nursing, British Cardiovascular Society/ European Society of Cardiology, Ethics and Patient Safety expert - Cardiothoracic Anaesthetist, Critical Care Psychologists, British Thoracic Society, Extracorporeal Membrane Oxygenation Expert, Barts Health NHS Trust, European Resus Council and specialists in Research, Innovation and Engagement.

38. Additional organisations joined NECCC with each week that passed as and when additional expertise was identified, and their representatives attended meetings. The minutes of the NECCC meetings from the Relevant Period can be located at Exhibits SM/4 - INQ000395340 to SM/33 - NQ000395333. All individuals who attended were

initially identified in the minutes attached. As time went on, and the number of attendees increased, the minutes noted those to whom minutes were distributed and a record of who attended was not kept. All minutes are appended to this statement so that the Inquiry can see who from each organisation attended or were provided with the minutes on each occasion.

39. NECCC provided a forum for the NHS to provide a regular update on Covid-19, its spread, testing and the significant challenges that the hospitals were facing at that time. It created a regular meeting place for the NHS to advise the sector, directly and quickly, about what it needed to know, what ICUs should be doing and what they shouldn't be doing.

40. By way of example, the challenges faced at the first meeting on 18 March were said by NHS England to relate to the:

    a. Logistics and delivering goods/equipment to hospital;

    b. Trade and the international movement of equipment. Producing countries are on lockdown;

    c. Distribution channels for PPE.

41. The attendees discussed the challenges faced by the NHS and by those on the ground in ICUs each week and decided on actions to be taken forward by individuals who might be able to assist. The meeting minutes indicate that even at that very early stage of the pandemic NECCC was creating actions, for example contributing to the development of guidance for Respiratory Physicians. Please see section on Guidance Documents below for full detail.

42. In order to identify any key areas of focus for the first NECCC meeting, an analysis of WhatsApp messages sent between 8 and 17 March was conducted by the Society. The outcome of that analysis can be located on pages 5 and 6 of the minutes from the 18 March 2020 NECCC meeting at Exhibit SM/4 - INQ000395340. At that very early stage, the following themes were identified (using the headings from the meeting minutes) as being experienced by a number of persons across intensive care, and this analysis allowed us to foresee different scenarios and to enable ICUs to plan ahead:

    - Personnel Management – a key theme identified early on was how ICUs might cope when patient numbers exceeded beds and staffing levels. There was

early identification of possible staffing issues including because of childcare issues if schools were closed, or because of sickness. Possible contractual and legal issues were also discussed and identified, for example, if employees were asked to work outside of the scope of their practice.

- Personal Protective Equipment ("PPE") - it was identified that there was differing advice being given from different organisations globally including WHO and PHE with regard to PPE, as advice from various different professional bodies was being published at different time frames when the evidence emerged. I cannot now recall specific examples of the differences, however, the NECCC minutes record that there did not appear to be agreement on footwear in ICUs, for example, or the type of hoods to be worn and whether there were different levels of severity of PPE for different scenarios, locations and medical procedures. Concerns were being raised as to the scalability and availability of PPE.

- Testing – this involved discussion around what treatment should be provided in the absence of testing. This was at a stage where lateral flow testing had not yet been developed and a number of issues were raised regarding how to safely carry out medical procedures that involved intubation and the provision of oxygen due to the concerns about contamination and Covid-19 spread. The concerns were about both patient, staff and family safety, in the absence of available testing processes. The discussions about oxygen developed over time into concerns about oxygen demand and supply pressures, and how to maintain safe levels (see below). The NECCC meeting minutes from 9 December 2020 note that "*there have been an increasing number of patients and relatives refusing ICU care and mechanical ventilation specifically with COVID patients*". The Inquiry has requested further information on this, however, I was not present when this update was delivered by Ramani Moonesinghe of NHSE to NECCC and so I am unable to provide further detail or context behind this statement.

- Ethics – Intensive care is not restricted by cost or resources. It is for the most critically ill patients in the UK and therefore there is, and remained throughout the Covid-19 pandemic, access for all that required it. Nevertheless, it was necessary at the outset of the pandemic for the NECCC to consider what would

happen if hospitals became overwhelmed, how hospitals could plan, and how patients could be triaged in the worst-case scenario. Some examples of the types of ethical dilemmas discussed include discussions about treatment decision making and triage or transfer decision making should a situation arise where capacity (both in terms of available beds and/or available trained staff) became limited. The Society's Legal and Ethical Group ("LEAG"), which met regularly, discussed these matters in a dedicated forum. Further information on the clinical tool arising out of those discussions is provided at paragraphs 70 and 71 below.

- Coordination – it was identified that coordination between different hospital departments such as respiratory wards and specialist extracorporeal membrane oxygenation ("ECMO") centres would be required to ensure clarity about how and when to refer and the ability of these services to accept referrals.

- Set up – this heading catered for the logistics of intensive care and how to limit the spread of Covid-19 within hospitals. It included how hospital spaces could be set up to cope with the increased demand, what equipment would be required and any issues that might be foreseen with regard to supply.

- Capacity – the group had identified that there would be a requirement to plan for increases in capacity and surges by, for example cancelling elective surgeries or changing staffing ratios. Most Trusts were required to cancel treatment, however, decisions about what would be cancelled, when and whether alternative arrangements could be made were decisions made at Trust level and not by the Society.

- Technology – this looked at how technology could be used to facilitate communications and reduce the spread of Covid-19 in hospitals.

- Experimental treatment – even within the first week or so of the pandemic impacting the UK, NECCC attendees were examining the possibility and feasibility of new treatments and identifying necessary research avenues.

43. These early themes identified via the WhatsApp analysis were then pulled through into the weekly NECCC meetings and, where required, converted into actions to take forward. By having policy makers present at the NECCC meetings, they were able to

hear the concerns raised by those directly caring for patients with Covid-19 and identify crucial topics and themes.

44. There were 30 NECCC meetings in total and, rather than take each meeting in chronological order we considered that it might be helpful to the Inquiry to outline in the statement some of the key themes and workstreams that were considered and discussed by attendees as per the below. There were many other matters discussed in the NECCC as is shown by the meeting minutes, however in terms of key themes these were as follows:

Ventilatory support and capacity

45. Through NECCC, the Society assisted in ensuring that there was clarity about ventilatory support and capacity available for those who required it. Minutes from the early NECCC meetings identified that the government were in talks with private and public organisations regarding the production of ventilators.

46. As noted in the minutes of the 30 September 2020 NECCC meeting, equipment was not deemed to be as much of an issue as by that point there was a system in place for ensuring a good supply of consumables. There was by this point also a good reserve of ventilators in preparation for a second wave. Whilst not all available ventilators at that point had the same functionality as those bought outside of the pandemic, it was deemed suitable.

Oxygen supply

47. Oxygen supply was one of the fundamental themes of NECCC. Throughout the pandemic there were different opinions about the best way to deliver oxygen to Covid-19 patients. For example, oxygen via intubation created a closed circuit whereas other methods such as Continuous Positive Airway Pressure ("CPAP") and humidified high-flow therapy ("HFNO") had a risk of aerosolisation of the virus - and also used vastly greater oxygen flows.

48. There were a number of different factors for ICUs to consider in relation to oxygen supply methods. As a priority, intensive care professionals had to consider the patient's needs and medical condition. In addition to that, we had to consider the repercussions on other patients and staff due to the risk of aerosolisation of the virus and the possibility of subsequent contamination and spread.

49. Ventilators and other advanced respiratory devices (e.g HFNO) require large amounts of compressed gas (oxygen and air) to deliver the appropriate concentration and pressure of oxygen to a patient. As the number of patients requiring respiratory support increased, the demand for oxygen increased and as such there were concerns whether there would be enough oxygen provision.

50. Oxygen delivery and capacity is even more complex than equipment and patient requirements and especially in the context of a pandemic. The core hospital oxygen supply pipelines have automatic 'cut off' levels. This is designed to prevent an explosion occurring if an oxygen leak occurs and cannot be overridden safely. However, extra-ordinary oxygen use would produce the same pressure drop, and the oxygen supply cutting off in response would threaten the lives of all patients using such equipment. The flow of oxygen from a main tank to a patient care space is dependent on the piped oxygen system in a hospital. Differences in the diameter of these pipes mean that unlike an appropriately specced intensive care unit, certain ward areas may not be designed to tolerate significantly higher demands and therefore not suitable for use as extra intensive care areas. This resulted in much clinical time being spent on monitoring the oxygen supply pressures and equipment use, running oxygen pressure tests, and modelling patient mix to ensure oxygen therapy was delivered in the right clinical areas. The latter meant that patients would not always be cohorted in the preferred designated clinical spaces because of constraints around oxygen delivery to these areas. This all required careful planning and clinical engagement. In my experience, the documentation required to understand the hospital schematics were not always immediately available or easy to understand. The accessibility of this information and interpretation as well as consideration for future hospital designs is important for future pandemic preparation.

51. The Society issued a Safety Alert on 5 April 2020 (Exhibit SM/34 - INQ000395334) as a result of an NHS England Improvement ("NHSEI") Urgent Patient Safety Notice ("UPSN") to communicate the concerns and risks regarding oxygen use, which included some advice about steps to take. The Safety Alert strongly encouraged all institutions to pay close attention to the actions required in the USPN, specifically urgent liaison between clinicians and hospital oxygen engineering teams in respect of assessing and monitoring the infrastructure systems for delivering oxygen.

Renal support

52. There was significant need for renal care among Covid-19 patients. Around a quarter of ICU Covid-19 patients needed renal replacement therapy in wave 1 ('a kidney machine' which replaces the normal blood-filtering function of the kidneys). There was a genuine concern amongst ICUs that we would run out of machines, and guidance and strategies were put in place as outlined below at paragraphs 53 and 54 to help in these circumstances.

53. Unfortunately, throughout the pandemic, ICUs experienced a shortage of machines, circuits and consumables for renal replacement therapy due to challenges with supply from Europe. NHS England set up a centralised dialysis consumables coordinating team to coordinate the delivery of dialysis fluids and catheters and to allocate them appropriately. In parallel, in June 2020 we wrote a guideline developed in collaboration with the Renal Association (see Guidance section below).

54. In addition, one of our Council members and her hospital team developed a technique to produce dialysis fluid in-house. This was shared with NHS England and the renal resilience team. I have attached the relevant paper for information (Exhibit SM/35 - INQ000395335).

Anti-coagulation

55. Blood clotting (thrombosis) was common in patients with Covid-19. At the outset of the Covid-19 pandemic, how best to prevent and identify such clots were identified as issues to urgently address and 'Anticoagulation' became a workstream for NECCC.

56. On 22 April 2020, the Society thus brought together Haematology, Radiology, Respiratory and Emergency Medicine experts in a 'Knowledge Share' to discuss this issue and to produce guidance.

Tracheostomy

57. Tracheostomy (a procedure to help air and oxygen reach the lungs by creating an opening into the trachea from outside the neck) is performed in around 10-13% of all level 3 UK ICU admissions. Before the clinical course of Covid-19 in the critically ill had been fully characterised, it was identified that there were considerations for patients with new or existing tracheostomies. It was necessary to balance the risks of infection

control regarding the aerosol spread of the virus versus the best management for the patient with a tracheostomy.

58. NECCC created a forum for specialists to discuss what they were seeing on the ground, and the need was identified for practical guidance regarding how to manage a tracheostomy patient (either when ventilated or not) and performing a new tracheostomy (see Guidance table below).

Wellbeing

59. The Society is familiar with supporting its members through difficult and traumatic situations, as the very nature of intensive care involves routine exposure to the death of patients. However, the pandemic saw a significant increase in the number of ICU patients, in their ages (younger than usual), and their death rate. Staff also felt pressure from risk of infection (for them and their families), working long hours (with limited breaks) in uncomfortable PPE, and working outside roles for which they were trained or with others working in this way. Together, such pressures (and more) caused intense psychological pressure. From the outset of the pandemic, NECCC recognised this and identified maintaining psychological wellbeing of staff and their families (hereafter, 'wellbeing') as a crucial element of its work.

60. Due to the volume of workstreams that arose out of NECCC on this topic, a separate section has been produced in the statement below. However, as can be seen from the NECCC briefing papers at Exhibits SM/36 - INQ000395336 and SM/37 - INQ000395337, at the end of March 2020, NECCC had already commenced reviewing existing research from official bodies such as WHO and critical care psychologists, trauma psychologists and those who worked with patients in Wuhan (Covid-19) or previous novel infectious-disease outbreaks including SARS, MERS and Ebola to see what lessons could be learnt. In addition, NECCC members commenced primary research, and identified and created guidance and briefings that would be useful to staff, patients and families to help them prepare for the psychological impact of Covid-19.

Rehabilitation post ICU

61. NECCC identified early on in the pandemic was that the impact of Covid-19 would not just be immediate in terms of critical hospital treatment. NECCC carried out a horizon scanning exercise to identify future potential issues.

62. Recovery for ICU patients would need a longer-term strategy and NECCC identified that rehabilitation alternatives to hospital could be required in the medium to long term. The Society engaged with NHS England, the National Olympic Committee, hoteliers, and sports science/rehabilitation leads to brainstorm ideas and develop research streams to proactively prepare for possible future needs. The Society then set up the multi professional and multi-agency National Rehabilitation Collaborative to drive this workstream and report back to NECCC.

63. Recovery and rehabilitation for ICU patients commences on the ICU and continues on the acute wards to which ICU patients are normally transferred. It then continues more long term on non-acute wards and in the community. Recovery from ICU is lengthy and costly and therefore a multidisciplinary approach as early as possible is required for ICU patients.

64. Several workflows spawned from these discussions. This included the development of a screening tool to inform the rehabilitation and support needs of patients following treatment in intensive care (Exhibit SM/38 - INQ000395338) which was designed to: inform the immediate plan for care on the acute ward; identify problems that are likely to require further, more detailed assessment/evaluation by members of the multi-disciplinary team; and inform the development of the rehabilitation prescription as patients leave the acute care setting. It also included a helpful guide to assist those in identifying rehabilitation needs (Exhibit SM/39 - INQ000395339) by detailing the categories of rehabilitation needs and the level of involvement and care that those patients would require. This ranged from 'Category A' patients who have very complex rehabilitation needs requiring specialist inpatient rehabilitation delivered by a multi-professional team, to Category C patients who do not have complex rehabilitation needs and who would be suitable for rehabilitation in a residential setting. The Society also collaborated to prepare a paper 'Speech and language therapy for Covid-19 patients and beyond' (Exhibit SM/40 - INQ000395341).

Training for non ICU staff

65. As above, personnel management was an area of concern identified even prior to NECCC being formed. NECCC took significant steps to address that concern in relation to the training of non-ICU staff and upskilling those who were redeployed. Examples of how this was done are provided below at paragraph 66.

66. By way of examples, the Society:

- Assisted British Association of Critical Care Nurses ("BACCN") to communicate and signpost their training for non-ICU nurses working in critical care;
- Made online teaching resources available;
- Liaised with Major Victoria Bulleid to work with her to prepare a nursing training package for military medics to assist on ICU wards;
- In September 2020, the Society also awarded a grant of £5,000 to Brunel University to fund a project for GP training about rehabilitation needs post Covid-19 "the Covid-19 ICU Remote Learning Course (CIRLC) to raise awareness of Post Intensive Care Syndrome in Primary Care."

Ethics decision making

67. At the request of the four Chief Medical Officers ("CMO") for the UK, Dr Ganesh Suntharalingam (the then President of the Society) and Prof. Helen Stokes Lampard (former Chair of RCGP), were asked to assist the Government's Moral and Ethical Advisory Group ("MEAG") in developing national guidance on clinical prioritisation and risk thresholds to guide organisations' and clinicians' response to the Covid-19 outbreak.

68. A draft framework and background document was prepared by MEAG and circulated to NECCC marked Confidential, not for further circulation. However, it was not ever published as expected.

69. It was clear from feedback received at NECCC meetings that there was a need for national guidance and that those on the ground would benefit from some direction to assist them in their decision-making in of the event of the NHS being overwhelmed and patients needing to be triaged for treatment. This was a particular concern in the early stages of the pandemic when little was known about the virus, and the supply of

vital resources and trained staff was uncertain. The Society was therefore keen to retain the clear advice developed in the draft guidance.

70. The Society subsequently developed the draft guidance for ICU staff to use as a Decision-Support Tool if required (Exhibit SM/62). It was endorsed by the Society, and also by:

- Royal College of Physicians (London)
- SICS
- WICS
- All-Wales Trauma and Critical Care Network
- National Critical Care Networks of England
- Critical Care Network Northern Ireland

71. It was intended to provide practical support and clear protocols for clinicians to apply and to support them accordingly in considering what treatment would be most appropriate for a patient. A decision on the appropriateness of a specific treatment was not concerned with whether patients would receive treatment, but what treatment should be offered that would be most likely to benefit them. To assist in this decision making, the guidance provided: a structured approach to assessing when critical care is an appropriate option; individual and organisational responsibilities in respect of critical care and capacity decision making; and commentary on ethical practice when critical care capacity is overstretched. The principles identified within the guidance were intended to be consistent with the current ethical and legal frameworks already in place at that time. The Society produced this as a tool to support clinicians however it was down to individual Trusts to implement it at a local level as they considered necessary and appropriate. The Society does not request feedback from Trusts as to how or when it was implemented and so it is not able to provide any examples of individual clinicians having used the Decision-support Tool nor is the Society able to comment on how individual clinicians may have made treatment decisions prior to the tool being developed. In any event, by the time that it was issued in May 2020, the situation on the ground was more stable, lockdown restrictions were eased, and it was clear that the Decision-Support Tool would likely not need to be used. As the long-term situation was unclear, the guidance remained in place throughout the pandemic for use by Trusts if required in future waves, and it was also published in the Journal of

the Intensive Care Society (2021. Vol 22(3) 204-210). The LEAG also released a one-page summary on legal liabilities and indemnity.

Research

72. NECCC provided a forum for attendees to be kept abreast of academic research that was ongoing to assist with understanding and treating Covid-19, and creating a vaccination against the causative virus. The Society did not undertake any Covid-19 research itself, but awarded grants to fund it, as follows:

Date	Title of the study	Amount awarded
Nov-20	How does the severe critical illness driven by Covid-19 encode its long-term effects?	£14,291.00
Nov-20	The psychological impact of surviving an intensive care admission due to Covid-19 on patients in the United Kingdom	£14,361.50
Nov-20	Characterising biological mechanisms underlying ethnicity associated outcomes in Covid-19	£14,838.74
Feb-22	Ventilator-induced kidney injury (VIKI)	£10,000.00
Feb-22	Variant-to-function: understanding the role of DDP9 genetic variants in acute and chronic lung disease	£14,830.00
Feb-22	Identification of mechanisms underpinning antibiotic-induced immunomodulation in sepsis	£13,000.00
		£81,321.24

73. The Society considers that one of the key advantages that the UK had over other countries during the pandemic was the national clinical critical care research infrastructure which enabled high quality studies to be designed and recruit patients to better understand the impact of various treatments on the virus. They worked tirelessly to understand the virus so that the intensive care professionals could decide on the correct treatment and the relevant precautions that should be taken.

74. Nationally, all non-Covid-19 clinical research was paused for several months while research staff focussed on Covid-19-related work. This will have had an impact on the

quality of some of these existing non-Covid-19 trials, with patient recruitment suspended, and those already enrolled often missing outcome measures due to staff being re-deployed to clinical work. The effect of this on patient care going forward is unknown. In addition, some hospitals redeployed their research staff to direct clinical care, and this was to the detriment of even Covid-19 research.

Data collection and access

75. NECCC identified that the absence of centrally-held data for Covid-19 patients made it logistically very difficult to obtain, compare and analyse the data that were being recorded. The challenge was that in England there were a number of different systems and data-custodians, whereas in other countries (for example Scotland) data were held in a central location, making it easier to access and interpret trends.

76. One of the tasks that NECCC identified was to try to create a single data entry portal for all NHS patient data in England, and a number of different ways of achieving that were considered. This would require the amalgamation of NHS data held by individual Trusts into one central system. It is not an exercise that the Society would be able to conduct itself as it is not the custodian of the data - it would have been an exercise that would have needed to be conducted by the NHS. Unfortunately, it became apparent that such an exercise would be very complex, time consuming and require significant funding and so lobbying for the creation of this portal was not pursed, although the Society still believes that this would be a useful tool to have in place in the event of another pandemic.

Personal Protective Equipment

77. As identified prior to the NECCC meetings commencing (see above) there was differing advice being provided from different organisations globally including WHO and PHE with regard to PPE. The Society responded to the evidence around PPE as it was emerging and changing, and there were ongoing discussions around whether or not the PPE that had been recommended by the different global organisations was effective. The Society worked with the Infection Prevention Society to produce an educational video for intensive care professionals about the use of PPE. The Society deferred to PHE in relation to issues of PPE, and the Society's messaging to its members was aligned with the NHS messaging. Guidance was issued by the Society on PPE (see below).

Guidance

78. NECCC drove the clinical response nationally and, with advice from legally-qualified advisers, the NECCC identified areas where guidance was required. As mentioned above at paragraph 35, if a particular idea raised at a NECCC meeting had support, then it was noted as an action to be taken forward by the most suitable organisation. That could have been the NHS, a research facility or any other person who could assist. This section sets out information about the actions that were taken forward by the Society and developed into guidance that was either produced by or in collaboration with the Society. Our members formed working groups who wrote national guidance on many aspects of intensive care management, including ventilatory support. The guidance that was prepared, crystallised and converged the experience and practice of the multi-professional intensive care staff along with research and academic leads as discussed in the NECCC meetings. In effect, the guidance produced put into writing what was already being done in practice on the ground.

79. Some of the guidance was produced in conjunction with other organisations and some guidance was produced with the Society as the lead. Other organisations often endorsed the guidance that the Society produced. As with any guidance, implementation at a local level was a matter for the individual regions.

80. We created guidance on a multitude of areas impacting intensive care including the developing clinical management of Covid-19, therapeutics, ethical frameworks, resource and infrastructure. The Inquiry has helpfully identified those guidance documents on which it would be useful to have further information. For ease of reference, we have placed them in chronological order within the table below, along with a short summary of each. The table below contains all relevant guidance that was produced by or with the collaboration of the Society and if it is not so listed then it does not exist. The Inquiry kindly identified those guidance documents on which it wanted to have further detail and those 39 guidance documents are attached in full at Exhibits 41 to 79.

No	Guidance Title	Description	Date
1	Guidelines on The Management of Acute	This was a pre-Covid-19 guideline document which was published by FICM and the Society.	July 2018

	Respiratory Distress Syndrome (SM/41 - INQ000395268)	The Guideline uses Grading of Recommendations Assessment, Development and Evaluation ("GRADE") methodology to make recommendations for the management of adult patients with acute respiratory distress syndrome ("ARDS"). GRADE is "a systematic and transparent approach for rating the certainty of evidence in systematic reviews and clinical practice guidelines, and for developing and determining the strength of clinical practice recommendations" (*Graholm A; Alhazzani W; Morten, H Moller* (2019)) The British Thoracic Society supported the recommendations in The Guidelines. The topics considered were chosen by the Guideline Development Group ("GDG") in light of the results from a survey carried out for the Society, including 566 responses from 3,200 members. Certain topics were excluded by the GDG if it was felt that there was a dearth of evidence, when the evidence was not specific to ARDS, and if there was overlap with existing guidelines. The Guideline received contributions from 21 individuals, as listed on page 4 of the exhibit, including input from specialist external consultants internationally.	
2	Prone Positioning in Adult Critical Care (SM/42 - INQ000395279)	This is a pre-Covid-19 guidance document published by FICM and the Society in respect of using proning for patients with ARDS. The Guidance outlines that research into this topic over the previous two decades, combined with primary research conducted by the Society and	Nov 2019

		FICM, indicated that oxygenation can be significantly improved in patients with ARDS when ventilated in the prone position, and that the majority of the Society and FICM's members routinely proned a patient with refractory hypoxia. The Guidance was produced with the aim of helping to improve safety and reduce complications associated with the prone positioning of mechanically ventilated patients. The Guidance also aims to standardise the approach to managing cardiac arrest in the prone position, to provide some guidance on prone ventilation in ECMO patients, as well as considerations for performing bronchoscopy in the prone position. The Society revised and reissued this guidance during Covid-19 and published Prone Ventilation and Covid-19 (see below)	
3	Information about 2019-nCoV for UK Critical Care Departments (SM/43 - **INQ000392124)**	Guidance issued by the NHS's High Consequence Infectious Diseases (Airborne) Network and endorsed by the Society. The Guidance is in respect of: Preparing critical care departments for Covid-19; Managing suspected Covid-19 patients; Managing confirmed Covid-19 patients; How critical care patients access the HCID(A) network; Non-invasive ventilation and High Flow Nasal Cannulae; Steroid therapy; and Critical care patient access to ECMO.	Undated but published February 2020
4	Covid Lung Ultrasound Dataset (SM/44 -	Covid Lung Ultrasound Dataset published by the Society.	Undated but published

	INQ000395301)		March 2020
5	Daily Checklist for ventilated Covid-19 patients (SM/45 - INQ000395302)	Daily Checklist for ventilated Covid-19 patients published by the Society which detailed the required treatment protocol for the different components of a ventilated patient's care including: Airway; Breathing; Circulation; Sedation; Exposure; Food and Family; Haematology; and Infection/Drugs.	Undated but published March 2020
6	Prone Positioning in Adult Critical Care (SM/46 - INQ000395303)	This document was designed to be a 'quick guide' for those working in ICU in respect of prone positioning in adult critical care. It was published by FICM and the Society The document provides guidance in respect of: Pre-procedure; Airway/Breathing; Neuro; Skin/Eyes; Tubes/Lines; General guidance. It also provides a pictorial guide to proning safely, and a safety checklist for those conducting the manoeuvre to follow.	Undated but published March 2020
7	Covid-19 Airway Management Principles (SM/47 - INQ000352876)	Guidance published by the Society, FICM, the Association of Anaesthetists ("AoA") and the Royal College of ("RCoA") Anaesthetists in respect of emergency tracheal intubation of Covid-19 patients. The Guidance provides a summary and workflows of how to intubate critically ill adults, as adapted for patients with Covid-19.	13/03/20
8	Physiotherapy Lung Ultrasound - A Practical Guideline on Supporting Acute Hospital Colleagues	Guidance published by the Society, Physiotherapy Lung Ultrasound ("PLUS"), and the Association of Chartered Physiotherapists in Respiratory Care ("ACPRC").	23/03/20

	(SM/48 - INQ000395305)	The Guidance focusses on supporting acute hospital colleagues with the aim of explaining the current known Covid-19 presentation and progression under Lung Ultrasound assessment to allow physiotherapists to contribute to the acute and critical care workforce as well as guide their own physiotherapy interventions.	
9	Lung Ultrasound for Covid-19 (SM/49 - INQ000395306)	The Society manages the UK national accreditation programme (Focussed Ultrasound in Intensive Care – FUSIC) for lung ultrasound. During Covid-19 we published further guidance based on experience from the intensive care community in China and Italy explaining the benefits of Lung Ultrasound for patients with Covid-19.	23/03/20
10	Decontamination Guidelines ultrasound Transducer and Equipment Cleaning and Disinfection (SM/50 - INQ000395269)	Guidance published by the Society, The Society for Acute Medicine ("SAM") and Focused Acute Medicine Ultrasound ("FAMUS") providing recommendations for individual focused ultrasound in intensive care ("FUSIC") and focussed acute medicine ultrasound ("FAMUS") practitioners and departments to minimise the risks associated with Point of Care Ultrasound ("POCUS").	23/03/20
11	The role of ultrasound for patients with suspected or proven Covid- 19 (SM/51 - INQ000395270)	Guidance published by the Society, The Society for Acute Medicine ("SAM") and Focused Acute Medicine Ultrasound ("FAMUS") outlining potential indications of uses of Point of care ultrasound ("POCUS") and how, when and by whom it should be performed. Point of care ultrasound refers to a focused ultrasound examination performed for a specific clinical	23/03/20

		question or for specific symptoms at the patient's bedside, remote from the radiology department. Commonly, POCUS refers to an ultrasound examination performed by a non-imaging specialist, such as staff in the Emergency Department, the Intensive Care Unit, Urology, and, increasingly, in GP surgeries. In addition, POCUS frequently aids the decision-making of obstetricians, podiatrists, paramedics and other practitioners in a variety of locations. Sonographic features of Covid-19 are also described. The guidance contains links to the Society's website where videos of how to perform lung ultrasound were located, along with infographics.	
12	Considerations for tracheostomy in the Covid-19 outbreak (SM/52 - INQ000395271	Guidance published by the Society with FICM and the National Tracheostomy Safety Project ("NTSP") for NTSP considerations for tracheostomy in the Covid-19 outbreak. The guidance considers balancing the risk of infection control regarding aerosol spread of the virus versus the best management for the patient with a tracheostomy.	24/03/20
13	Joint Statement on Developing Immediate Critical Care Nursing Capacity (SM/53 - **INQ000227427)**	Joint statement from multiple organisations outlining the principles for increasing the nursing workforce in adult critical care. The statement sets out the commitments of each of the signatories and it arises out of the acknowledgement of the need to train non-ICU nurses to work in critical care.	25/03/20

		The Joint Statement is endorsed by 14 Organisations (including the Society) as identified on page 1, and signed by those listed on pages 4 and 5 of the exhibit.	
14	Family Leaflet "the care we provide for your relative" (SM/54 - INQ000395273)	Leaflet prepared by the Society advising families of the care that will be provided to their loved one who has been admitted to intensive care with a severe chest infection (pneumonia) which is suspected to be a result of Covid-19. The leaflet sets out how treatments are supportive only, and will not influence the effect of coronavirus on the body. It also provides details of resources available to families for support.	26/03/20
15	Use of Continuous Positive Airway Pressure (CPAP) for Covid-19 Positive Patients (SM/55 - INQ000395274)	Letter from Professor Jane Eddleston, Chair of NHS England Adult Critical Care Clinical Reference Group, on letter headed paper from the Society and FICM. It's likely that the Society added its logo to this NHS letter support its rapid dissemination. The letter sets out early indicators that the use of CPAP may be of benefit to patients earlier on in the Covid-19 disease process than first thought and may prevent deterioration. It also provides a link to updated NICE guidelines on the use of CPAP in the early stages of the disease.	28/03/20
16	Introduction to Critical Care: A Covid-19 Rapid Response Document (SM/56 - INQ000395275)	UK Clinical Pharmacy Association (UKCPA) Guidance document endorsed by the Royal Pharmaceutical Society and the Society. The Guidance aims to provide pharmacists with	Undated but published April 2020

		a brief understanding of the critical care patient, the environment, and some of the tools to provide clinical review.	
17	Guidance for Prone Positioning of the Conscious Covid Patient (SM/57 - INQ000395276)	Guidance published by the Society which provides guidance on proning conscious patients who have contracted Covid-19. It includes a flow diagram to identify when it may be beneficial to trial conscious proning. The document incorporates indications and contradictions as well as a guide on how patients should position themselves. The Society had produced proning positioning critical care guidance pre-pandemic. When hospitals realised that proning was helpful for Covid-19 patients, the existing guidance was developed for Covid-19 patients. The proning guidance had some interest internationally, with France, Spain, Canada and the US, wanting to replicate it. During NECCC meetings clinicians reported that as a result of proning some patients were suffering with brachial plexus injury known as Prone Position Plexopathy (PPP) and the Society worked with the British Orthopaedic Association to produce guidance about this. See below and exhibit SM/72 - INQ000395293.	12/04/20
18	Position Paper Covid-19 Visiting at the End of Life: Facilitating Compassionate Care for Patients Dying with Covid-19 (SM/58 - INQ000395277)	Joint statement from the Infection Prevention Society ("IPS") and BACCN, endorsed by the Society setting out the facilitation of compassionate care for end of life patients with Covid-19. The paper provides commentary on: Facilitating family visits; The location of the	15/04/20

		dying person; Getting to the hospital/hospice/care home; Minimising the risk of infection; Care of the next of kin/significant other; Actions at the end of the visit.	
19	Advice for Hospital Admitted Patients: How to Manage Post-viral Fatigue after Covid-19 (SM/59 - INQ000395278)	Guidance published by the Society and the Royal College of Occupational Therapists ("RCOT") on managing post-viral fatigue for patients who have been admitted to hospital with Covid-19. The guidance provided advice for patients whilst in hospital and once discharged, and focussed on a range of topics including rest, nourishment, movement, routine and fun activities to aid recovery from post-viral figure in a manageable way. The guidance also offered advice about what to do if symptoms were not improving.	May 2020
20	Advice for Non Hospital Admitted Patients: How to manage post-viral fatigue after Covid-19 (SM/60 - INQ000395280)	Guidance published by the Society and the RCOT on managing post-viral fatigue for people who recovered from Covid-19 at home.	May 2020
21	Practical Advice for Conserving Your Energy During Post Covid-19 (SM/61 - INQ000395281	Guidance published by the Society and RCOT on how to conserve energy for people during and after having Covid-19. The guidance document discusses the '3 Ps Principle': Pace, Plan and Prioritise.	May 2020
22	Clinical Guidance: Assessing whether Covid-19 patients will benefit from critical care, and an objective approach to capacity challenges (SM/62 -	Guidance published by the Society as referred to and discussed at paragraphs 71 and 72 above.	Undated but published May 2020

	INQ000395282)		
23	Guidance on the Use of Video Communication for Patients and Relatives in ICU (SM/63 - **INQ000352892)**	Guidance published by the Society, UKCCNA, BACCN, Critical Care Networks-National Nurse Leads (CC3N) and PICS which relates to the use of video conferencing between patients in ICU and their families; and Factors to consider before using video conferencing technology.	Undated but published May 2020
24	Covid-19 Pandemic Personal Protective Equipment (PPE): Guidance for Intensive Care (SM/64 - INQ000395284)	Guidance published by the Society, FICM, UK Critical Care nursing Alliance ("UKCCNA") and Infection Prevention Society ("IPS"). The document sets out guidance for intensive care in respect of pandemic personal protective equipment for the purpose of Infection Prevention and Control (IPC). The Guidance is written in support of critical care delivery and offers a pragmatic interpretation of the generic PHE guideline on PPE issued at that time. The guidance addressed the types and specification of PPE to be used for elective and emergency procedures in both Aerosol Generating Procedures ("AGP") and Non AGPs where a patient does not have Covid-19 and where a patient is suspected to have Covid-19. The Guidance also details how frequently the PPE should be changed. The guidance recommended a variety of PPE to be used in different circumstances, by way of example fluid resistant surgical masks ("FRSM") were recommended for patients who were suspected or proven to have Covid-19, but were undergoing a non-AGP, whilst filtering face piece 3 ("FFP3") masks were	July 2020

		recommended for suspected or proven Covid-19 patients undergoing AGPs, as FFP3 masks are designed with a minimum filtration of 99%, thus protecting against very fine particles. The Guidance was endorsed by the five Organisations listed on page 2 and contributed to by 20 individuals listed on page 4 of the exhibit.	
25	Musculoskeletal and Physical Therapy for Covid-19 Patients In ICU and beyond (SM/65 - INQ000395285)	Guidance published by the Society setting out how the effect of ICU on muscle and aerobic capacity, and the use of proning during mechanical ventilation leads to an increased stress on the cervical spine and shoulders, requiring specific MSK rehabilitation in a large number of ventilated ICU patients. The Guidance provides recommendations for MSK rehabilitation.	August 2020
26	Neurology for Covid-19 Patients in ICU and Beyond (SM/66 - INQ000395286)	Guidance published by the Society setting out the recognition that Covid-19 may result in neurological presentations, complications and sequelae, particularly following critical care. The document provides recommendations in respect of: General functional recovery; Screening for neurological symptoms; Formal assessments; Involvement in a registry; and Triggers for neurological referral before or immediately following transition to ward care.	August 2020
27	Dietetics for Covid-19 Patients in ICU and Beyond (SM/67 - INQ000395287)	Guidance document published by the Society which identifies that at the time of its production, there was no consistent follow-up from a nutrition perspective nationally for a general ICU patient and the NICE Guideline for	August 2020

		rehabilitation after critical illness (CG83) provides little nutrition related information. The Guidance sets out that emerging data suggests nutrition related symptoms manifest early in the viral process and are persistent post discharge from ICU. The Guidance sets out the importance of nutrition input during and post ICU. It provides recommendation for practice following admission to ICU with Covid-19.	
28	Occupational Therapy for Covid-19 Patients in ICU and Beyond (SM/68 - INQ000395288)	Guidance document published by the Society which identifies that at the time of its production, the outcomes for patients post ICU admission with Covid-19 was not fully understood. The Guidance set out the impairments which were being reported at the time of its production, and recommendations for practice. The Guidance received contributions from five individuals listed on page 3 of the exhibit.	August 2020
29	Psychology Support for Covid-19 Patients in ICU and Beyond (SM/69 - INQ000395289)	Guidance document published by the Society which identifies the anticipated psychological needs of critically ill Covid-19 patients. It identifies that at the time of its production, increasing evidence showed that coronaviruses are not always confined to the respiratory tract and may also invade the central nervous system, including neurological diseases and therefore patients are likely to experience cognitive impairments. The Guidance references existing guidance for critical care patients, and provides recommendations for practice.	August 2020

30	Responding to Covid-19 and beyond: Framework for Assessing Early Rehabilitation Needs Following Treatment in Intensive Care (SM/70 - NQ000395291)	A Framework document published by the Society, the British Society of Rehabilitation Medicine ("BSRM"), the Royal College of Physicians ("RCP") and Royal College of General Practitioners ("RCGP"). The Framework aims to provide guidance for improving the early identification of rehabilitation needs in ICU patients in the acute setting; signposting the appropriate specialist assessment and investigation for patients in the context of the Covid-19 pandemic; improving the communication of these needs along the patient pathway. The Society's National Emergency Critical Care Committee established in March 2020 identified rehabilitation as a core area of concern. As a result, in April 2020, the Society convened the National Post-Intensive Care Rehabilitation Collaborative consisting of over 30 multi-professionals. The Collaborative reported into NECCC on a weekly basis. This Framework is the initial output of that group and is endorsed by 10 Organisations as listed on page 2 of the Framework.	06/10/20
31	Renal Replacement Therapy for Critically Unwell Adult Patients Guidelines for best practice and service resilience during Covid-19 (SM/71 - INQ000395292)	Guidelines published by the Society, the British Renal Society ("BRS") and The Renal Association. The purpose of the Guidelines was to support implementation of the NHS England service specification which describes the requirements for renal replacement therapy as an independent service for adult critical care services. The Guidelines were prepared with	08/10/20

		patient review. The Guidelines received contributions from over 50 individuals listed on pages 2 and 3 of the exhibit and were accredited by the National Institute for Health and Care Excellence ("NICE").	
32	Guidance For: Prevention, Diagnosis and Management of Plexopathy During Prone Positioning (SM/72 - INQ000395293)	Guidance document published by the British Orthopaedic Association and the Society to help minimise the risks associated with proning. The Guidance aimed to address concerns about the risks of proning and does not purport to address all causes of peripheral nerve injury from ITU care but to function as a guidance document towards best practice. This Guidance supplements previous guidance issued on proning and was produced in response to an increased presentation of a number of cases of brachial plexus injury known as Prone Position Plexopathy. During the pandemic the Society, like everybody else, was required to react to the changing circumstances of Covid-19 and to adapt as necessary in line with the most recent data and learnings.	November 2020
33	Covid-19 Best Practice Guidance: Feeding Patients on Critical Care Units in the Prone Position (awake and sedated). (SM/73 - INQ000395294)	Guidance published by The British Dietetic Association (BDA), the Critical Care Specialist Group and the Society in respect of critical care best practice for feeding patients on critical care units in the prone position (awake and sedated) which aims to provide practical guidance to optimise nutrition and safe feeding in the prone position and provide a summary of the evidence available.	09/12/20

34	Intensive Care 2020 and beyond: Co-developing the future (SM/74 - INQ000395295)	Report published by the Society, which presents findings from extensive engagement across the intensive care workforce, with findings from a series of focus groups regarding the delivery of intensive care, and responses to a survey from over 500 Society members. The report examines six questions: What is intensive care for; How many ICU beds do we need; Who should staff intensive care; How should we develop intensive care staff; How do we know how good we are; What is the role of research in intensive care.	Undated but published January 2021
35	UKCCNA Position Statement – Nurse Staffing during Covid-19 (SM/75 - **INQ000300140)**	Position Statement published by the UKNCCA which the Society is a member of. The Statement addresses: Nurse-patient ratios; Redeployment of staff; and Nurse well-being. This document did not replace the previous Position Statement but reinforces the position that safety is best with a trained nurse ratio of 1 nurse to 2 patients. The statement was reviewed by NHS England.	13/01/21
36	Recovery and Restitution of Critical Care Services during the Covid-19 pandemic (SM/76 - INQ000395297)	Analysis document published by the Society which provides principles and recommendations for the recovery phase of ICUs. The Guidance covers four key aims: Space and services, staffing, specialist equipment and impact on scheduled surgery; A description of the critical care recovery phases and definitions; Criteria and recommendations for each of the described recovery phases; Data showing the scale of additional ICU beds opened in January 2021 compared with 2020.	09/02/2021

		Further information on this document and the information contained within it is provided below at paragraphs 131 and 132.	
37	Intensive Care Guidance for the Management of Vaccine Associated Thrombocytopenia and Thrombosis (VA TT) (SM/77 - INQ000395298)	Guidance published by the Society and the Neuro Anaesthesia and Critical Case Society (NACCS) in respect of the management of Vaccine Associated Thrombocytopenia and Thrombosis (VA TT). The Guidance provides commentary on: Background; Clinical features; Laboratory Investigations; Imaging; Management; and Reporting.	09/04/2021
38	Pulse Oximetry and Ethnicity – the time to act is now. (SM/78 - INQ000395299)	Press Release published by the Society in respect of the equipment used to monitor oxygen saturations, especially for patients with darker skin pigmentation. The Press Release highlighted the risk of oxygen monitoring device error as with critically unwell patients, hypoxaemia and hyperoxaemia have been associated with harm and so it is imperative that pulse oximeters maintain a high degree of accuracy. The report identified that the Covid-19 pandemic demonstrated an increased mortality in people of Black origin and that erroneous pulse oximetry measurements cannot not be ruled out as a contributory factor. The Press Release also made a call for: Industry to test their current pulse oximeters across a diverse population and report result; Industry to firmly and publicly commit to a future which ensures maximum accuracy for all patients; Healthcare organisations to commit to only using medical devices of any kind after	22/06/2021

		shown to be accurate across a diverse population; Our colleagues and intensive care societies around the world to demand similar action, to ensure the possibility of a patient coming to harm due to a device error is minimised as much as possible.	
39	Capacity Transfer of Adult Critical Care Patients Position Statement (SM/79 - INQ000395300)	Position Statement of the Society and FICM in respect of capacity transfers. A critical care capacity transfer occurs because of insufficient staffed beds and involves the transfer of an existing patient to another intensive care unit. Capacity transfers occur for two main reasons: Emergency capacity transfer; Planned surgery capacity transfer. The Position Statement sets out the situations in which the Society and FICM would support capacity transfers for planned surgery. This includes exceptional circumstances requiring a national or health board 'command and control' level response e.g. during the Covid-19 pandemic and if there is a subsequent serious risk of increased morbidity or reduced survival if surgery was to be delayed. Operational and governance safeguards must be in place to ensure transfer process and procedures are followed and are detailed in the document. The Position Statement was endorsed by the Organisations listed on page 1.	November 2021

Knowledge Sharing

81. The Society convened several free and educational knowledge sharing webinars involving national and international clinicians working at the frontline, so that learning could be disseminated rapidly. The first was held on 3 April 2020 and involved over 100 clinicians. The panel was made up of those who had experienced the early impact of the first Covid-19 wave and shared knowledge about the treatment of patients with Covid-19 particularly focussing on: ventilation; fluid balance; antibiotic use; renal support; and workforce issues.

82. The knowledge sharing webinars were organised and held very quickly once a particular issue was identified via the NECCC meetings. When the attendees came to a consensus on the particular topic, the Society issued a short narrative of key emerging knowledge within a week of each knowledge sharing webinar which was disseminated to the Society's wide network (via email, Twitter, Linked in, WhatsApp etc.) so that it was available to everyone working in intensive care. The written output from the first knowledge sharing webinar on 3 April 2020 can be located at Exhibit SM/80 - INQ000395342. The papers produced after these sessions were not, as is specified on the face of them, clinical guidelines. They simply summarised the knowledge and experience discussed at the sessions whilst acknowledging that those experiences may change in the rapidly developing situation. The sessions also identified emerging and unanswered questions and identified research areas to inform clinical practice.

83. The Society arranged a second free and educational knowledge sharing webinar for a wide international audience of 1000 clinicians to learn from experts treating patients with Covid-19 across China, USA, Germany, Spain, Italy, France, Qatar, Iran and UK, and for those experts to learn from each other. The session was hosted on 13 April 2020 by the Society, following the informative session held previously between UK clinicians. The follow up document can be located at Exhibit SM/81 - **INQ000330842**

84. A third knowledge sharing session was organised on thromboprophylaxis and anticoagulation of ICU patients. The attendees shared clinical experience of the management of Covid-19 infected patients across England. The session was hosted on 22 April 2020 by the Society, and invited clinicians from acute and emergency care, intensive care, nursing, pharmacy, radiology, respiratory medicine, and thrombosis

and haemostasis. The follow up document can be located at Exhibit SM/82 INQ000395344.

85. Every day saw more knowledge and experience of Covid-19 and its best management. The knowledge sharing sessions were organised to try to facilitate cross-setting knowledge sharing on key issues. With the anticoagulation knowledge share, for example, the intensive care professionals in NECCC began having conversations about clotting, and less than a week later the Society had set up the knowledge share session that raised the clotting issue so that the experts could discuss it and, if possible, come to a consensus on the way forward.

86. This was a crucial stage of knowledge transfer for the treatment and care of patients with Covid-19 during the first wave and these knowledge sharing events undoubtedly led to clinicians having better knowledge to help to save more lives. The Society created dedicated webpages to host all the guidance we published during Covid-19 and made access freely available to all clinicians and policy makers.

87. In addition to the knowledge sharing webinars, two educational seminars were developed in collaboration with the Royal College of GPs to enable GPs to hear first-hand what admission into intensive care entails and to shed light on the impact of a Covid-19 hospital admission on patients and their families. It covered:

- What is critical care?
- A Covid-19 case story / patient journey
- Cardiovascular critical care and complications around Covid-19
- Covid-19 respiratory complications
- Covid-19: The patient journey from rehabilitation to recovery.

88. The second GP webinar allowed the primary care community to hear from the multi-professional team in intensive care to understand some of the rehabilitation needs of patients post-Covid-19 critical illness. It covered:

- The challenges around recovery of communication and swallowing post ICU
- The psychological impact of Covid-19 recovery and what to look out for
- The breathless ICU survivor post coronavirus infection - heart, lungs or muscle as the problem?

89. In addition, the Royal Society of Medicine developed a Covid-19 webinar series to provide healthcare workers with regular and easy to access updates on Covid-19 from

healthcare leaders. Members of the Society contributed to and hosted a number of those webinars. We also partnered with RCoA, FICM and the Association of Anaesthetists to create a new standalone website as a central repository for collaborative guidance between the four organisations to enable both the intensive care and anaesthetics communities to access joint guidance via one portal.

90. The Society collaborated with the Physiological Society to establish the Covid-19 Advisory Panel comprised of 26 experts which sought to provide an understanding of the physiological and pathophysiological mechanisms underpinning Covid-19. There were 29 questions submitted from intensive care professionals working on the frontline dealing with patients. Out of the 29 questions, 23 were answered – those questions were on:

1. Abnormal coagulation
2. Renal failure and ventilation
3. Intubation and hypoxaemia
4. Children and women
5. Hypertension and diabetes risk factors
6. Pulmonary artery pressures
7. Cardiac troponins
8. PPE and CPAP developments
9. Vitamin C
10. Vitamin D
11. Hydroxychloroquine
12. Proning
13. Sodium levels
14. Asthma sufferers
15. Hypoxaemia
16. Harvesting serum from cured COVID-19 sufferers
17. Arginase inhibitors
18. Thromboxane
19. Gastrointestinal symptoms
20. Re-infection
21. Citrodiol
22. Guidance for conducting experimental work

23. Pathogenetic mechanism of action of SARS-CoV-2

91. Out of the questions submitted, 22 were answered between March and June 2020 as outlined in Exhibit SM/83 - INQ000395345 with the final question being answered after the impact report was published. The questions and answers document titled Questions from the Front Line can be found at Exhibit SM/84 – INQ000421706.

92. In December 2020, the Society and the Physiological Society came together to host a 3-day virtual conference focusing on the challenges of understanding the pathophysiological changes occurring throughout the body following Covid-19 infection. The conference shared current knowledge and thinking across many physiological systems, showcased the symbiotic relationship between physiology and critical care, and helped set the agenda for research to identify future treatments and therapies.

93. It was unique in enabling the voices from physiology and intensive care to come together to discuss the challenges of identifying future therapies, the importance of rehabilitation, and what questions remained unanswered. Both learned societies brought together experts across disciplines and professions to reflect on how we could progress our understanding of Covid-19, to improve outcomes in the future.

Wellbeing - The impact on the Society's Members, Patients and their Families

94. In ordinary circumstances outside of the Covid-19 pandemic, circa 20% of patients admitted to ICUs would die there; however, during wave 1 of the pandemic between February and August 2020, this increased to circa 43% (Armstrong, R.A., Kane, A.D. and Cook, T.M. (2020), Outcomes from intensive care in patients with COVID-19: a systematic review and meta-analysis of observational studies). In many ICU's this was also 50% of a higher total number of ICU patients than outside of the pandemic. Further, the pandemic was an incredibly uncertain time, and those working in intensive care were facing a multitude of challenges such as a lack of beds and experienced and trained intensive care staff, a lack of PPE, and the concerns around protecting themselves and their own families at home. The Society was acutely aware of the stressful impact that this would have on our members, and we felt passionate about providing as much support and guidance to assist as possible.

95. The Society was also very aware of the fact that not only would those working in intensive care be experiencing stressful situations at work, but they would also be

experiencing the same anxieties outside of work with family members becoming unwell with Covid-19, stresses caused by isolation, and the uncertainty of the pandemic.

96. As soon as the scale of pandemic became clear to the Society, we began developing initiatives to ensure that we were providing the necessary support and guidance. Between February and June 2020, we developed a number of free online resources to help provide basic wellbeing advice and support. These resources were downloaded over a million times across the world in 2020 and have been translated into several different languages. We appointed a Consultant Clinical Psychologist to work with the Society as National Wellbeing Director to help us to build the necessary capacity and capability to support intensive care professionals.

97. Between September 2021 and January 2022, the Psychologists in Intensive Care UK ("PINC-UK") were surveyed to benchmark psychological services in ICUs by analysing the membership to PINC-UK, which showed that in January 2020, only 44 out of 230 UK ICUs, (equating to less than 20%) had direct access to a practitioner psychologist (Intensive Care Society. *Integrated Practitioner Psychologists Guidance).* In 2020, we developed a business case for a baseline of 80% of ICUs to develop their own local service through their Trust, and we worked with 48 units to help develop the provision of psychology to intensive care. We feel strongly that ICUs should have ongoing access to psychology services, and so although this was initially aimed at providing support throughout the pandemic, it is something we strive to continue developing.

98. It quickly became apparent that we would require additional funding to be able to provide the level of psychological support necessary.

99. The Society initially launched an 'Urgent Appeal' fundraising campaign in March 2020. This was followed by a second fundraising campaign directly focussed on wellbeing known as the Wellbeing and Resilience through Education Campaign ("WARE"). WARE was a new area of work for the Society and for the first time it took us into service delivery by providing psychological support directly to intensive care professionals across the UK. The funds raised by the WARE Campaign allowed us to recruit a practicing Consultant Clinical Psychologist to work for the Society for two days per week to lead the project as our National Project Director for Wellbeing. This was quickly followed by the recruitment of an Assistant Manager to work alongside the Consultant Psychologist to deliver and manage the project. The WARE Campaign also enabled us to develop a range of services and guidance including:

- Psychological intervention for intensive care staff

100. Thanks to the positive response to the WARE Campaign and other national fundraising campaigns and the donations to the Society, we were able to provide direct psychological support for intensive care professionals. Between July and November 2020, the Society recruited 16 professional psychologists, and inducted and trained them to confidently provide 1:1 sessions for intensive care staff. This service was tailored specifically for intensive care staff due to the unique situations and stresses that they experience at work.

101. Intensive care staff were able to receive up to six free one-hour sessions of tailored psychological support. We promoted this service throughout the UK to provide support in finding ways to deal with their experience of the pandemic.

- Peer support training program

102. This programme was designed to upskill intensive care staff to be able to support their peers. We provided them with the tools they need to help sustain wellbeing, support those who are struggling, and ensure that staff who may be unwell receive the timely assessment and mental healthcare they required.

103. Between August and November 2020, we commissioned expert trainers to develop a "train the trainers" peer support programme, and to develop training materials for ICU staff. We trained 16 ICU staff from across the UK as 'Master Trainers' so that they could work with us to deliver free one day training to more ICUs.

- Journey to Work Podcast

104. We launched the Journey to Work podcast series which was branded as the Workforce Wellbeing podcast series. The series covered a range of topics aimed at educating clinicians on wellbeing in intensive care. The podcast series hosted various guest speakers to talk about their experience in intensive care throughout the pandemic, and to provide advice on wellbeing.

- Webinars

105. The Society held a series of webinars focussing on wellbeing in intensive care which covered a range of topics including:

    a. Covid-19 psychological needs of healthcare staff
    b. What do our nurses need right now?
    c. Pandemic related grief and loss
    d. The traumatic impact of work
    e. Preventing burnout in intensive care
    f. Staff wellbeing in ICUs during the pandemic
    g. The wellbeing narrative
    h. Care after incidents.

- Wellbeing Hub

106. We created a dedicated COVID-19 hub on our website to house all the up-to-date information our intensive care community needed to help support them and their patients.

- Thriving at work

107. Within the wellbeing hub, we created guidance to promote 'thriving at work'. This included three main topics:

    a. 'Prevent': Guidance for considering how individual ICUs were set up to enable workforce wellbeing. This included an Assurance and Improvement toolkit for units to self-assess
    b. 'Maintain': Intensive care is a high-stakes, high reward environment and we recognised the need to gain knowledge to maintain that environment and provide psychologically informed care to our patients, their loved ones, and for each other. We call this secondary intervention. This section provided seminars and resources to psychologically manage working in intensive care, advice for managers on managing staff wellbeing, and webinars about managing patient wellbeing

c. 'Respond': This section provided immediate guidance and support in relation to setting up a system for responding to clinical incidents to protect the wellbeing of staff, and offer a reflective approach to case discussion.

- GAmeplay Intervention for NHS ICU Staff Affected by Covid-19 Trauma

108. We were, and we remain an active collaborator in the *GAmeplay Intervention for NHS ICU Staff Affected by Covid-19 Trauma* ("GAINS") study, funded by the Wellcome Trust. The study set out to support intensive care staff who have experienced stressful and traumatic events from working in the Covid-19 pandemic.

109. The aim of the study was to look at developing self-management techniques to support healthcare staff with intrusive unwanted memories they have been experiencing during the pandemic and beyond.

110. The Society ensured that the intervention, study, design and recruitment approach were tailored to ICU staff and helped to recruit the 86 participants who took part in the study. The study is still continuing and the first manuscript setting out research methodology was published in October 2022.

- Wellbeing framework

111. We designed and released our Wellbeing Best Practice Framework for intensive care. This document provides a best practice framework to guide commissioners and budget holders, senior hospital management and intensive care teams on ways to provide the best possible employee experience within intensive care (Exhibit SM/85 - INQ000395346). The Framework identified 10 core themes for proactively improving the experience of working in intensive care and the sustainability and wellbeing of the workforce as follows:

a. Intervening for wellbeing should be preventative as well as responsive;
b. Effective leadership is fundamental to staff wellbeing;
c. Staff need clear communication and opportunities to feel engaged with the work;
d. Job design and access to job related resources impacts people's ability to care for patients, and therefore staff wellbeing;
e. Access to education and opportunities for progress improve people's experience of work, sense of purpose and development;

f. A safe and fit for purpose physical environment with both sufficient facilities for staff and infrastructure for patient care are essential;
g. Relationships with peers and unit culture should be actively shaped by leaders;
h. Monitor and measure wellbeing and factors which are influencing it;
i. Understand and mediate the staff stress and trauma response; and,
j. Staff need access to evidence-based psychological therapies.

- Wellbeing posters

112. We developed a series of wellbeing posters to be displayed across ICUs to provide information and guidance on wellbeing throughout the pandemic, and to signpost professionals and patients to the support available to them. In total, throughout the pandemic, we produced over 20 posters and we exhibit a bundle of the posters at Exhibit SM/86 - INQ000395347. The posters covered a wide range of topics for staff and managers including:

a. Managing stress in ICU
b. Burnout
c. Tips for managers to protect the psychological well-being of their teams
d. Managing shift work and fatigue
e. Managing trauma
f. Managing trauma in your staff
g. Managing bereavement
h. Mind your mind
i. Moral distress
j. Traumatic events at work
k. Switch off, relax and unwind
l. End of Shift Wellbeing
m. Moral Distress and Injury

The Covid-19 Healthcare Support Appeal

113. The Covid-19 Healthcare Support Appeal ("CHSA") was set up by the Royal College of Nursing Foundation as a time-limited charity in April 2020 to provide financial support to organisations supporting health and care staff adversely affected by the Covid-19 pandemic. Funds could be accessed via the CHSA by way of application for grants, and the Society obtained essential funding via grants from the CHSA

throughout the pandemic which enabled it to develop its Wellbeing Programme to its members.

114. The Society first obtained funding via the CHSA in January 2021 and the objective of the funding was to produce a variety of training programmes to be delivered to intensive care professions covering psychoeducation, peer-to-peer support, and leadership as follows:

- Psychoeducation

115. The psychoeducation course was developed in January 2021 and was formed of five modules which were delivered live in webinars by trained psychologists. The modules were:

a. ICU Aware - Stress Awareness for Managers: How to recognise stress in staff that you manage and respond quickly and effectively using the PIES Principles
b. ICU Share – Recognition of stress in the team and team approaches to supporting each other
c. ICU Protect – Managing my stress in the ICU: explore stress awareness and self-care techniques in greater detail in tensive care staff
d. ICU engage: Preventing burnout and reconnecting with your core purpose at work. A course to tackle the specific problem of burnout and disengagement
e. ICU Sustain: Managing the psychological impact of working in ICU group. A closed group across four sessions providing group psychoeducation and self-management of repeated exposure to trauma and its impact. Making sense of clinical experience.

116. From the start of the CHSA grant, 1140 participants were supported via the psychoeducation webinars. We recognise that the need for wellbeing work will continue and so we have developed and updated this programme post-pandemic which continued to run throughout 2022 and 2023.

- Peer Support

117. The Society created a Peer Support strategy in November 2020 and received a grant from the CHSA in respect of this programme in January 2021 running through to 2022. The Peer Support programme was provided within the context of a systematic,

strategic approach to sustain staff who are coping well, support those who are struggling, and ensure that staff who may be unwell receive the timely assessment and mental healthcare they require. The aim of the programme was to train people so that they could use their own experiences to help each other.

118. The peer support programme included two key areas. Firstly, comes theoretical input such as the principles of psychosocial care and peer support, primary and secondary stressors. Secondly, are experiential exercises, including skills for peer support (for example, active listening skills) and scenarios.

119. We developed a one-day online session which trains people from ICUs to become Peer Supporters.

120. By 31 December 2022, we had trained a total of 249 'Peer Supporters' across intensive care in the UK. This programme continues to be delivered throughout 2023 and 2024 but is no longer grant funded.

- Leadership Support

121. The Society's first senior Leadership Programme (LeaP1) was created in April 2022 and funded by CHSA. We designed it as a multi professional and experiential course for senior leaders in intensive care to learn from each other and from experts. We use business school style lectures and focussed intensive care sessions intended to train critical leaders to support those who had worked through the pandemic and who were (then, or now) in leadership positions. In total, the first cohort consisted of 18 senior clinicians within critical care. The course was delivered between 8 April 2022 and 14 November 2022 and covered the following modules:

    a. Leading successful and sustainable projects for quality improvement
    b. NHS infrastructure and how the NHS works NHS values, culture and behaviours
    c. Campaign to tackle racism in the NHS
    d. Environmental Sustainability and the NHS Green agenda
    e. Development of self as leader
    f. Managing difficult conversations and getting the best out of people
    g. Knowledge exchange and networking with clinical thought leaders in intensive care (via our State of the Art Congress)

h. Emotional intelligence: Understanding self to understand others
i. NHS funding and the development of successful business cases
j. Understanding the role of managers and how they can help
k. Preparation for the 'Healthcare Challenge' project
l. Development of strategy: NHS 10 year plan, review of targets; personal leadership journey
m. Healthcare Challenge
n. Building team effectiveness
o. Systems leadership
p. Presentation of Quality Improvement Projects.

122. After the CHSA grant funding ended the Society delivered the second year of the Leadership Programme (LeaP2) between March and November 2023 and will also be running it during 2024.

123. The Society promoted the resources and programmes we developed throughout the pandemic across a variety of platforms so that we could reach as many intensive care professionals as possible. This included:

a. Social media (Twitter, Facebook and LinkedIn)
b. Weekly newsletter to members
c. Local engagements
d. Dedicated Wellbeing hub on the Society Website
e. Wellbeing and Resilience through Education (WARE) Project Stakeholder group
f. Society Council (mostly consultant intensivists at present)
g. Professional Advisory Groups (PAGs) for: Trainee consultant intensivists, Nurses, Allied Health Professionals (AHP), Pharmacists and Advanced Practitioners in Critical Care (APCC)
h. National Society/FICM Covid-19 leads WhatsApp group
i. National Emergency Critical Care Committee (fortnightly meetings)
j. Psychologists in Critical Care UK (PINC-UK)
k. CC3N (The Critical Care National Network Nurse Leads Forum)
l. PCCS (Paediatric Critical Care Society)
m. RCN (The Royal College of Nursing)
n. FICM (The Faculty of Intensive Care Medicine)
o. BACCN (The British Association of Critical Care Nurses)

p. Operational Delivery Networks (ODN).

124. The Society continually received very positive feedback from the course delegates and the programme's success is evident from the fact that it continues in 2024.

125. To obtain grants, the CHSA required us to provide regular reports which enabled them to measure the impact of the funds awarded to the Society, and to assess the evolving needs across the health and social care sector. The reports provide a detailed overview of the progression of the programmes we were running throughout the pandemic and are provided at Exhibit SM/87 - INQ000395348.

Capacity in the healthcare system

126. Intensive care is at a crossroads and is facing serious issues including ICU staff shortages (primarily in our nursing population, but also amongst doctors and other key health care professionals), burnout and psychological trauma, lack of core funding, capacity constraints, and an inability to deliver the rehabilitation services our patients need to get them back to some form of a normal life (British Medical Association (2021). *NHS medical staffing data analysis).*

127. Capacity issues in intensive care is not a new post-pandemic problem. It is important to look at the pre-pandemic situation to set the scene before considering the post-pandemic position, and what can be done. An ICU could be 'at capacity' if it does not have the physical occupancy to take any more patients, or if it does not have enough trained staff for the number of beds occupied in the ICU. Staffing shortages for allied health professionals were well documented pre-pandemic, with clinical psychology and occupational therapy having the highest vacancies. In addition, occupancy rates in intensive treatment units already ran higher than the Society's original recommendation of around 70%. Prior to the pandemic, there was very little resilience in the system for a significant increase in demand, especially on the scale of Covid-19 and far less than that in many other countries: the UK entered the pandemic with just 7.3 critical care beds per 100,000 people, less than half the average in OECD EU nations (15.9) (British Medical Association (2022). *NHS Hospital Beds Data Analysis*). The Czech Republic, for example, had 43.2 critical care beds per 100,000 people (over 5 times as many as the UK) and Germany had 28.2 (over three times as many as the UK).

128. As such, ICUs were very quickly at or over capacity, and UK hospitals were utilising non-ICU areas of hospitals for intensive care provision. General wards were used to provide ventilatory support for patients not mechanically ventilated (when such care was usually provided on ICU). In addition post-operative recovery areas were often used due to the availability of monitoring equipment albeit ICU-trained staff did not routinely staff these areas pre-Covid-19. Therefore, whilst it was technically possible to increase the number of beds for critically ill patients (that is not to say that the newly created beds were always ideal – see below), it is not as easy to increase the staffing requirement at short notice.

129. There was a huge impact on ICU staffing ratios during Covid-19 although, at the time, it was difficult to properly analyse the data because of differences in the way in which different Trusts were reporting staffing levels in SITREP reports. The Society relied on the expertise of the specialists attending NECCC to update the Society and its members on the issues arising in their area, and to assist with producing guidance. By way of examples: BACCN kept NECCC attendees abreast of the impact of the pandemic on nursing and nursing ratios, and what was being done to address this; and BACCN was a signatory to the Joint Statement on Developing Immediate Critical Care Nursing Capacity (SM/53 **INQ000227427)**. There was no one 'aligned' approach, and in this respect the SITREP reports didn't always seem to reflect what was happening on the ground. Our understanding is that some Trusts incorporated surge areas (i.e. non-ICU areas) into capacity calculations, which created skewed data. The Society issued a document on 3rd January 2021 advising that all hospitals use the percentage change from baseline as a reporting figure to help to get consistency across the data (Exhibit SM/88 - INQ000395349). As previously mentioned, guidance that is produced by the Society is for implementation at Trust level and the Society has no way of monitoring which Trusts implement it, or whether it is followed.

130. The Society produced a report titled 'Intensive Care 2020 and beyond: Co-developing the future' at a very early stage of Covid-19, and at a time where the data was still emerging surrounding the impact upon the intensive care sector (Exhibit SM74 - INQ000395295). The report presented findings from extensive engagement across the intensive care workforce, with responses from 516 participants in respect of six questions:

a. What is intensive care for? The report identified the following themes as key functions of intensive care services: Providing specialist multidisciplinary skills and ratios at the bedside; Delivering organ support; Supporting colleagues and patients on wards and in emergency departments; Providing infrastructure necessary to enable delivery of patient care pathways; and Delivering time-critical intervention when it is needed.

b. How many ICU beds do we need? The report drew the following conclusions: There is a lack of robust data to inform a generic model for all; A classification system based on patient needs for multidisciplinary staffing input is preferable to one that only considers physical beds; The best way to build flexible capacity needs to be explored.

c. Who should staff intensive care? The report highlighted the following: A multidisciplinary intensive care team is valued, but is not consistently recognised, available, or used within all hospitals, and the allied health professionals integral to the delivery of high-quality of care are often not adequately represented in intensive care management structures; Some work can be shared across disciplines; Essential staff include non-traditional intensive care providers, and non-clinical staff; The consultant-level medical workforce has limited capacity for surge.

d. How should we develop intensive care staff? The key observations from the report were: The qualification(s) necessary to work in intensive care are not well defined; Barriers to training exist, particularly for allied health professionals; Multidisciplinary training opportunities are valued; Task-focussed training can be rapid, but deeper understanding is often limited; Simulation-based and immersive training techniques were thought to be particularly effective, although robust data are lacking to support this view in the intensive care setting, and they are not currently available to all staff; Debriefing has been commonly used but optimal practice is still not known; Covid-19 has presented the opportunity to train a 'reservist' workforce but how should their skills be maintained?

e. How do we know how good we are? The following key themes emerged as particularly pertinent to assessing the quality of intensive care provision: We need to understand what is important to all our end users – including patients,

staff, families/caregivers, and commissioners – to understand what we need to measure; Understanding what happens after discharge from ICU is critical; Qualitative outcomes need to be captured - and acted upon; Expectation management – What can we do to improve public understanding of intensive care?

f. What is the role of research in intensive care? The report identified the following: All intensive care services should be supported in being 'research active'; Research is not currently equally embedded across intensive care, nor is it considered an integral part of their role by most staff; There is inequality in access to opportunities for intensive care staff to be involved in research – particularly in non-medical roles; Mentors and role models are important in the development of researchers.

131. The Society has subsequently reflected on the impact on the capacity during Covid-19 and has prepared a report dated 9 February 2021 'Recovery and Restitution of Critical Care Services During the Pandemic' ("R&R Report") (Exhibit SM/76 - INQ000395297) which analyses the historic data in an attempt to ascertain accurately what the shortages were and, importantly, to identify how critical care can attempt to recover from the pandemic. The recovery process is broken down in the R&R Report into phases 0 to 4, with 0 being an ICU with poor staffing and bed occupancy rates, and 4 being an ICU where bed occupancy and staffing standards are achieved. Recommendations are made for the recovery of ICUs in phases 0-4 on page 8 onwards of the R&R Report. Critical to recovery for the worst hit ICUs is regional and national support through mutual aid transfers or supporting surgery to minimise delays.

132. The R&R Report compared the bed occupancy during the first wave to the recommended staffing levels as identified in the Guidelines for the Provision of Intensive Care Services ("GPICS") prepared by the Society and the Faculty of Intensive Care Medicine ("FICM") to set out the standard and recommendations for the provision of intensive care services nationally. The R&R report identified that the extra 2251 ICU beds required in the first wave would have required the following additional staff (over and above the GPICS ratios for these roles which can be located at pages 14 to 19 of the R&R report) for every day (12 hour) shift:

a. 187 ICU consultants
b. 2476 critical care nurses, 1238 with a postgraduate qualification

c. 281 junior doctors
d. 225 pharmacists
e. 563 physiotherapists
f. 225 dietitians
g. 225 speech and language therapists.
h. 225 occupational therapists
i. 225 clinical psychologists

133. These additional trained staff do not exist. This work has been performed by existing ICU staff, supported by staff re-deployed from other departments or even other professions or jobs, with varying levels of skill and experience. These staff needed to return to their specialty areas as part of local and national recovery plans in a managed fashion so as to not destabilise critical care services.

134. Many experienced and trained critical care professionals have not returned to ICU work post-pandemic because of early retirement, sickness, or simply not wanting to continue after the impact of Covid-19. Retention is thus an issue for ICU, now more than ever.

135. In addition, there were significant gaps in training caused by Covid-19. For example, training for anything outside of the pandemic was badly impacted and many individuals' training was stalled for two years. This meant that expertise in Covid-19 management displaced the ability to take a history from, and examine, non-Covid patients. There is a lot of catching up to do in that regard. With experienced staff choosing or feeling compelled to leave critical care, and with the gap in training caused by the pandemic, there is a dilution of experience and there are gaps that need to be filled. This would be a significant issue if there were to be another pandemic or any other noteworthy increase in demand on critical care.

136. The shortfall in staff during the pandemic (in particular, nursing staff) undoubtedly had an impact on the physical and mental wellbeing of intensive care professionals. A 2021 paper (Greenberg, N, et al, *Mental Health of staff working in intensive care during Covid-19. Occup Med (Lond))* indicates that, from data collected in June and July 2020, after the first wave, one in five nurses and one in seven clinicians working in ICU reported thoughts of self-harm at that time and 45% of clinicians had self-reported symptoms that may lead to a diagnosis of PTSD. Many staff reported moral distress as a result of having to work outside of GPICS ratios, and staff turnover is increasing.

Reintroduction of pre-pandemic staff standards is thus fundamental to wellbeing and productivity, and to preventing psychological harm.

137. Deviation from pre-pandemic standards may have had as-yet unquantified effects on patient safety, recovery from critical illness, and longer term outcomes, and must not in our opinion be assumed to be a model for extended implementation.

138. Attempts were made to scale up the number of intensive care beds during the Relevant Period, including through the use of temporary ICUs and Nightingale Hospitals. The difficulty with creating 'new' ICUs is that intensive care is very complex, and requires access to diverse other specialists, tests (laboratory, imaging and more), and diagnostic and therapeutic equipment. There isn't any 'one size that fits all'. In addition, if spaces are to be re-designated as Respiratory Support Units, then appropriate infrastructure needs to be put in place together with the ability for ICU clinicians to regularly review (and rapidly accept) patients.

139. The staffing issue is one which is not so easily resolved, as it is not possible to quickly train staff in such a specialist skill, but equally it isn't practicable to 'staff for a pandemic' at all times. Nevertheless, there is significant work to be done to upskill staff and to return staffing levels to better than pre-pandemic levels in order that critical care can survive another pandemic.

140. The Society is dedicated to that improvement and continues to provide training and support to critical care.

141. The Society has also created an All-Party Parliamentary Group ("APPG") on Intensive Care which is a cross-party group of MPs and Peers who meet to discuss a particular issue of concern. APPG examines policy issues relating to these issues, and they hold events and inquiries to understand them in more detail.

142. The Society has established this APPG to provide a platform to voice the concerns of the intensive care community, ICU patients and their loved ones, and the wider public to help inform and educate Parliamentarians in their understanding and decision making about intensive care.

143. The primary focus of this group in the first instance is to raise major concerns about workforce and rehabilitation services and highlight the necessity to establish plans to

counter the severity of these issues. Without immediate support, our community and patients are seriously jeopardised.

144. This group also allows us to inform the future agenda of intensive care and champion appropriate levels of funding for both provision of our service across the country and for research that will literally help to save lives, as well as promoting the importance of appropriate investment into infrastructure to enable the delivery of better patient care pathways.

Other matters raised by the Inquiry

145. The Inquiry has asked specifically for information relating to any issues raised by members regarding the ability to provide safe and appropriate care to patients suffering with Covid-19 within ICUs or other healthcare settings during the Relevant Period, including in particular any concerns around the following specific matters: Conducting procedures which were considered to be aerosol generating; The use of Do Not Attempt Cardiopulmonary Resuscitation ("DNACPR") notices and communications with patients and their families about the same; Discharge of patients from ICUs and hospitals generally; Palliative care for patients who have been in or died in ICU after being infected with Covid-19; Covid-19 testing for intensive care professionals; Staff-related risk assessments; Air ventilation systems within ICUs; The availability of PPE within ICUs; The impact of limited PPE, or the non-availability of PPE, on the care that could be provided to patients in ICUs; The nature of the PPE available for use.

146. The main forum for members and non-members to raise any concerns about Covid-19, including about the matters listed above, with the Society was via the NECCC meetings. Copies of the minutes are appended to this statement. It is likely that most intensive care workers would have raised any concerns about the issues raised by the Inquiry via their line management with their Trust employer, rather than via the Society. As outlined above, NECCC created a forum for representatives of many different disciplines to raise and discuss matters, and actions were often taken forward by the organisation that was best placed to do so. Where any concerns were raised at NECCC, and the Society was identified as best placed to assist, it did its best to address those by way of information gathering, knowledge sharing and developing guidance to assist those on the front line as already outlined in this statement above.

147. It was open to members of the public and Society members to email the Society and to contact us via the Society website. We have reviewed the emails for any concerns raised in relation to the issues that Inquiry has identified and we enclose relevant emails and the Society's responses at Exhibit SM/89 - INQ000395350. By way of example:

    a. On 17 March 2020, A Consultant in Adult Critical Care from Wirral University Teaching Hospital wrote to the Society raising concern about the media's portrayal of the challenges that intensive care specialists were facing throughout Covid-19, specifically in respect of ventilators, and the effect this could have on public trust in intensive care. The Society responded to confirm that it had been working hard to maintain consistent and realistic messages, and that it had been working with a variety of organisations to deliver consistent messages to the media.

    b. On 28 April 2020, an ENT Consultant from Hampshire Hospitals NHS Foundation Trust contacted the Society seeking advice after their ICU colleagues had identified clotting as a result of decannulation of patients with Covid-19. The Society responded to confirm that it has heard of other problems with decannulation, and that a group of ENT surgeons was rapidly convening to create a working group on this matter (together with the Society). The Society copied in the working group and invited the Consultant to join the discussion which resulted in an email chain discussing this issue.

148. During an internal meeting of the Council of the Society it was identified that a concern had been raised by Speech and Language Therapist Allied Health Professional Members in respect of dysphagia procedures not being recognised as 'Aerosol Generating Procedures' ("APGs"), and therefore not receiving adequate guidance in respect of PPE. After this concern had been raised, the Society wrote a letter to the Royal College of Speech and Language Therapists to support the position that dysphagia procedures should be recognised as APGs.

149. As above however, the main pathway for contact with the Society by intensive care professionals was via the NECCC meetings. Whilst the Society has made attempts to locate all relevant emails, and responses to the relevant emails, this has not been possible for every email chain due to the passage of time, and movement of some of the Society's staff and volunteers, some of whom have since left the Society.

150. The Inquiry has also requested details of the role of members of the Society during the Relevant Period in relation to the provision of care and treatment for patients with conditions other than Covid-19, in particular: ischaemic (coronary) heart disease; colorectal cancer; patients undergoing hip replacement surgery; and pregnant women during labour and childbirth. Whilst those working in intensive care may have come across patients who were suffering from these conditions, if the patient required the services of ICU, the care of those individuals would have been dealt with at a Trust level and the Society would defer to those specialists working in those areas for detail of any issues or concerns that they experienced. We are of course aware that delays will have occurred to the elective surgical pathways however that is not an issue that the Society would have been involved with in terms of the decision making for that which would rest with each Trust depending on their capacity, the surge in that area etc. The R&R Report (Exhibit SM/76 - INQ000395297) at page 6 identified that scheduled surgery needed to be restarted at the earliest opportunity and it outlined how that could be done with the use of local prioritisation committee, a multidisciplinary approach and support for staff returning from ICU.

151. The Inquiry has asked for details of any information held by the Intensive Care Society regarding the transmission of Covid-19 amongst its members. The Society did not collect any data of that description, however, we would expect the members' respective employers to hold such information. The Inquiry has also asked whether the introduction and availability of routine Covid-19 testing in healthcare settings impacted the availability of intensive care professionals able to work during the Relevant Period. The Society does not have any data on that specifically however the general experience was that the Covid-19 testing of staff resulted in more staff being away from work when they returned a positive test and that was the right thing to do.

152. The Inquiry has asked whether the Society identified or was made aware of any issues around the unequal impact of the Covid-19 pandemic on its members. Although we as a Society were aware that discussions took place at Trust level to make changes to working arrangements to accommodate those who might be more impacted (for example, discussions around face fitting of individuals for FFP3 masks who had a beard for religious reasons, and the working arrangements in place for older Trust employees), the Society did not itself identify any issues or collect any data in this regard. These were predominantly issues for Trust employers to consider on an

individual basis and not something that the Society as an organisation was involved with.

153. The Inquiry has asked whether the Society would seek to make any recommendations to improve the response of the healthcare system in the event of a future pandemic. As the Inquiry would probably expect, this is an issue that the Society has given much thought to since the outbreak of the pandemic and there have been many discussions over the last few years, and which are ongoing between the multidisciplinary intensive care community on this matter. Current recommendations on behalf of the Society include:

Bed capacity and staff retention/training

a. Invest in retaining the skilled staff already delivering intensive care in the UK. It takes many years to educate, train and build up these skills. Retention is step one to safeguarding services now and for a future pandemic.

b. Increased ICU bed capacity across ICUs to at least the average seen across the EU nations. The UK was at a significant disadvantage at the outset of the pandemic due to a lack of suitable beds (and staff – see below).

c. Invest in training to 'replenish' ICU staffing to an appropriate level and standard. With experienced staff choosing or feeling compelled to leave critical care, and with the gap in training caused by the pandemic, there is a dilution of experience and there are gaps that need to be filled. This would be a significant issue if there were to be another pandemic or any other noteworthy increase in demand on critical care. There is significant work to be done to upskill staff and to return staffing levels to better than pre-pandemic levels in order that critical care can survive another pandemic.

d. Agree a definition of occupancy, baseline and surge capacity so that all Trusts and hospitals, the media and the government are able to compare and communicate capacity figures accurately. As an example, the Society issued the statement 'Understanding Intensive Care Staffing, Occupancy and Capacity' on 3rd January 2021 (Exhibit SM/88 - INQ000395349) to provide clear explanations.

e. The adoption of CRITCON scoring to provide real time observation and assessment of ICU strain by clinical leaders in both routine circumstances and rapidly evolving situations such as pandemics or major incidents. An adapted pandemic version has now been updated by the Intensive Care Society for use at local, regional and national level as supported by NHS England (Exhibit SM/90).

f. Increased training and capacity of critical care Outreach practitioners to support the rapid stepping down or stepping up of patients from and to Intensive Care based on clinical need within the hospital.

Hospital facilities and equipment

g. The requirement for hospitals to hold easily accessible and understandable data on oxygen and hospital schematics to enable the quick and efficient monitoring of the oxygen supply in each building. This will assist with the running of oxygen pressure tests and it is vital to understand the schematics of each hospital in order to be able to do so. During the pandemic this took up much valuable clinical time to assess potential areas for expanded ICUs which had sufficient oxygen provision and importantly would not impact on supply to other essential clinical areas. Future hospitals need to be designed with the necessary infrastructure to enable planned and emergency expansion of intensive care and respiratory support units.

h. A review and recommendations for communication tools within hospitals, regionally and nationally. The bleep system used by many Trusts in the UK is antiquated and one of the reasons many adopted the use of direct personal mobile phones and messaging apps such as WhatsApp. There is an opportunity to standardise this to enable the most secure and accessible platform for the future.

i. An audit of essential equipment available and required for future pandemics. This would include, but not limited to, ventilators, dialysis machines, and personal protective equipment.

Data and research

j. Maintain and grow clinical academia. The Society believes that one of the reasons that the UK managed the pandemic better than some of its Global

counterparts is because of the access it had to embedded clinical academia and research talent. Clinical academia in the UK is in decline and the Society fears that if there is not investment in that now, future pandemics may not have the expertise that we did to lean on. The UK had a huge advantage in having academic and industry vaccine and pharma here. The UK needs a strategy to attract and retain such industry and academic activity here in the UK, together with manufacturing capacity.

k. Grow and support embedded research capacity. In many Trusts research nurses and other healthcare professionals working in research including those recruiting patients to clinical trials were pulled back to frontline care, at a time when research was critical to the success in responding to the virus quickly and correctly. The Society is anxious that this does not happen again and investment in research is necessary.

l. UK healthcare needs an integrated hub of live patient data across NHS Trusts. This will improve care and will also be a huge resource for the UK economy. The absence of a centralised hub of patient data made it logistically very difficult to compare and analyse the Covid-19 data that was being recorded.

Miscellaneous

m. Review of rehabilitation equipment and space to help patients mobilise alongside adequately trained ICU Allied Health Professionals.

n. The provision of educational material and support for major incident planning for hospitals and Trusts.

o. Develop a formal psychological support programme for staff that involves employing psychologists within ICUs so they can provide proactive rather than reactive support to help staff to thrive at work and prepare them for another pandemic.

p. The pandemic shone the light on the fact that much severe disease was preventable. Disproportionate impacts were felt in those with severe and preventable comorbidities. We need to strengthen public health systems and implement robust changes in transport, food, alcohol and tobacco policy such as to reduce these comorbidities.

The future of the Society

q. The Society brought together experts and used this intelligence to inform decision making (including decision making regarding lockdowns) and further national priorities for health and social care. The Society should have a voice at the relevant fora informing national policy and decision making for Acute and Intensive Care in the UK both in peace time and during national emergencies.

r. The Society quickly mobilised its resources to support the national Covid-19 response. This was achieved by and for our membership through subscriptions and significantly enhanced by one-off charitable donations we received from the public, philanthropists and foundations which increased our charitable income tenfold to £754,103 during the first year of the pandemic. In future, modest core financial support would alleviate the need for members and members of the public to provide such extensive additional funding to finance the delivery of the critical activities delivered by the Society during the pandemic and beyond.

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: 26/03/2024