Witness Name: Professor Sir Michael McBride
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UK COVID-19 INQUIRY

WITNESS STATEMENT OF PROFESSOR SIR MICHAEL McBRIDE

I, Professor Sir Michael McBride, will say as follows: -

1. I, Professor Sir Michael McBride, Chief Medical Officer ("CMO") for Northern Ireland, make this statement in response to the request from the UK Covid-19 Public Inquiry ("the Inquiry") dated the 3May 2023 under Rule 9 of the Inquiry Rules 2006 (SI 2006/1838), requiring me to provide the Inquiry with a witness statement in respect of specified matters relating to Module 3.

2. The scale and severity of the Covid-19 pandemic has not been experienced since the 1918 to 1919 influenza pandemic. The scale of the response required by the public of Northern Ireland, health and social care and public health staff and services was without precedent. The direct and indirect consequences have been profound and are enduring and, in all likelihood, not yet fully understood or realised. The pandemic has had a significant impact on individuals, families and communities across Northern Ireland (NI). Tragically many lives have been lost, and many are still living with the direct and indirect consequences of the pandemic. This includes those with non-Covid-19 conditions whose diagnosis and treatment was delayed, and whose clinical care was adversely affected, potentially resulting in a poorer outcome. It also includes all those who were adversely impacted as a direct consequence of the measures that were required to be introduced. Not everyone was affected equally by these measures, younger and old people and those in manual roles and from lower

socio-economic groups were disproportionately affected. The full impact on the health and well-being of the people of NI, on their lives and livelihoods, may not become clear for some years. It is undoubtedly the case, that were it not for the altruism of the people of NI and across these islands and the action they took to protect others that the consequences would have been much worse. It is my sincere hope that, through this Inquiry, learning might be identified that ensures that should the need arise again we are as prepared as possible. While it will be for others to judge and ultimately determine, in my view, all those across health and social care from those in the frontline to the Department of Health (the Department) and other departments were committed to doing their very best to protect those most vulnerable and to save lives and protect livelihoods and to mitigate the consequences of the pandemic. It is my view that the same is true across other public services. When all is said and done, I believe this dedication and commitment merits recognition.

3. I must also offer my sincerest thanks to all those working across the Health and Social Care (HSC) system, public health, and scientific colleagues whose collective efforts undoubtedly saved many lives. This includes all Health Care Professionals and ancillary staff working in hospitals, primary care, care homes, the community and other settings. My thanks are also extended to the dedicated public health professionals, scientists and academics who, through their tireless endeavour, helped plot a route through and out of this pandemic. It also includes those perhaps less publicly visible staff who performed the important role of keeping public services operating and ensured that our clinical and social care services were maintained in so far as was then possible.

4. This collaborative and collective endeavour was also characterised by the work across government with other government departments. This collaboration was evident, for example with the Department for Communities and the Department of Education; the coordination role of colleagues in The Executive Office (TEO) in Northern Ireland; and across the United Kingdom (UK) and with the Republic of Ireland (RoI). Working at such pace with such complexity was extremely challenging for all concerned. The advice that I and the Chief Scientific Advisor (CSA) provided was focused on health considerations, with occasional

references to other areas such education, economy, communities as this related to medium to longer term public health outcomes. Other Departments provided advice on these aspects.

5. It is my observation that Ministers faced extremely difficult choices and challenges in trying to achieve a balance, given the complexity of the considerations and the need to consider not only the health implications and advice, but also the need to take account of a wide range of other factors such as economic advice, financial considerations, impact on education, family life, and societal and cultural considerations to inform their decisions. The decisions taken by Ministers required consideration of all of these factors, often with incomplete evidence particularly in the early weeks and months of the pandemic while our understanding was still limited.

6. These same inherent challenges arose for health and social care trusts (hereafter referred to HSC Trusts) who retained responsibility in trying to maintain access to routine health and social care treatment and support services while providing care for people with Covid-19 infection which required hospital admission and respiratory support. These challenges for HSC Trusts were further complicated by the need to protect patients and staff from the transmission of infection in health care settings. One of the most difficult and challenging areas was the role and responsibility of care home providers and HSC Trusts who commissioned that care in protecting those most vulnerable to the virus in care homes, who required close personal care, including managing the adverse health consequences of isolation and loneliness due to separation from family and friends. The commitment of all those care workers in care homes and those who continued to provide domiciliary care to people in their own homes was commendable and undoubtedly as in all areas across health and social care aspects of their experiences during the pandemic were distressing and harrowing. It is difficult perhaps now to fully capture and reflect, but the distress of families, care workers should not be underestimated. One of the most poignant images for me, of which regrettably there were many, was the hand of an elderly women and her relative – possibly her daughter – with their hands pressed together through a pane of glass. This is not how things should be and that it

was necessary was deeply regrettable. The issues of isolation and loneliness particularly affected those in care homes, as well as other groups such as the elderly, those in receipt of domiciliary care who were often housebound, and individuals suffering with their mental health before and during the pandemic. I am cognisant of the fact that lockdowns increased and exacerbated the vulnerability of other vulnerable groups, particularly in regard to domestic violence and child protection. Whilst I know that the Department took steps to try to address the needs of these different vulnerable groups, the details of which will be discussed in full in this and other statements, I also fully recognise that whatever action we took was unlikely to have ever been able to fully address the needs of all, or to mitigate the full impact on many of these vulnerable groups. These are important considerations and areas which require further research and consideration of potential future adaptations and approaches.

7. Through the collective commitment and collaborative approach taken by care home providers, the Trusts, the Health and Social Care Board (HSCB) (now SPPG within the Department), the Public Health Agency (PHA) and the Department, and work with other departments, my reflection is that every effort was made to ensure a proportionate and balanced approach was taken, given the circumstances and knowledge available at that time however imperfect that was. In all of this, there were no easy or straightforward answers or solutions, and every decision had significant and sometimes profound consequences. It is difficult now with hindsight to convey any sense of the level of uncertainty, the and the complexity and significance of the judgements required based on incomplete evidence. Notwithstanding any of this, it is incumbent on all that we use the opportunity of this Inquiry to learn those lessons, hear the experience of those most directly affected, and to ensure we are as prepared as we can be for the next pandemic.

8. The focus of this statement is the role that I played in the response to the Covid-19 pandemic taken by Northern Ireland's healthcare system, including my understanding of the nature and spread of the disease, my advice and guidance for healthcare provision and treatment for Covid-19, guidance for Infection prevention and control ("IPC"), advice on Personal Protective Equipment ("PPE"),

the development of testing for healthcare workers, the impact of the pandemic on staff as well as minority and vulnerable groups, and the lessons learned from the response to the Covid-19 pandemic.

9. I have written this statement to the best of my recollection of events as they occurred. To assist in this, I have reviewed relevant Ministerial submissions and Departmental records available to me. I have drawn on my personal witness statement and my significant input to the Department's corporate statements with respect to Module 1, Module 2C, Module 3 and Module 4 of the UK Covid-19 Public Inquiry. I have also referenced relevant sections within the UK CMO Technical Report of the Covid-19 pandemic in the UK to which I personally contributed [see Exhibit **INQ000203933** and which in its entirety is relevant to NI and from which I have not sought to provide any additional interpretation given the resolved and expert nature of the contributions and which also contains our considered reflections as UK CMOs which we hope will be of assistance to our successors in a future pandemic. Given the sheer pace and complexity of events, the number of key decisions made and the passage of time, it is inevitable that some of my recollections may be incomplete. Given the changes to normal working arrangements and the time taken to reallocate staff, particularly in respect of notetakers, there may be some gaps in the written records and my recollection of early meetings. It is also inevitable that others may have a different recollection of events. Where my recollection is less clear, I have considered the available written records to assist me. Given the share pace of events I cannot now be certain that all advice to the Minister and decisions were formally presented in submissions or in written advice particularly in the early weeks and months of the pandemic in the period leading up to the first lockdown in March 2020. It was simply not possible to do so while responding in real time to a rapidly evolving situation. While this can never be acceptable, and I acknowledge this will be a source of frustration to the Inquiry in identifying learning, it was the reality of the complexity and pace of events in the first weeks and January to mid-March 2020 which is even now difficult to adequately communicate and convey. I have however endeavoured to fully reflect my recollection to the best of my ability notwithstanding these shortcomings. I have also sought input from other colleagues within the Chief Medical Officers Group

(CMOG) and across the Department to help prompt my recall of events and have indicated where I have done so. In all such circumstances, the recollections and observations in the statement are my own. Where I am unable to recall the specific details, I have indicated what would have normally occurred in the context of the circumstances in question. I have also made this clear in my statement when I have done so. To assist the Inquiry and to address specific aspects of my response, I have also referenced work that my professional and policy colleagues in the Department took forward particularly under the oversight of the Rebuilding Management Board and the Integrated Covid-19 Gold Command Group, when established as described in paragraphs 34 and 35. This includes aspects of the role and responsibilities of the Health and Social Care Board (HSCB) now Strategic Planning and Performance Group (SPPG) within the Department. While a member of both the Rebuilding Management Board and the Integrated Covid-19 Gold Command Group, I attended when other commitments allowed. If not in attendance I was usually represented by one of the Deputy Chief Medical Officers (DCMOs), my role beyond the first wave of the pandemic was increasingly focused on the wider public health response and the Executive's response with respect to non-pharmaceutical interventions (NPI's) restrictions as reflected in legislation, including advising on UK wide travel restrictions as opposed to the operational service response of the HSC in NI. An example on action taken by policy and professional colleagues in the Department to support the mental health of the population during the pandemic is outlined at paragraph 435 - 437 although I was not directly involved in this. I have not in this statement set out the detail of all steps taken by the Department on certain policy areas as I did not myself lead on these issues and on which others will be better placed to advise. I have however described the general approach taken and my knowledge of this.

ROLE OF THE NORTHERN IRELAND CHIEF MEDICAL OFFICER

Overview

10. I have been the CMO for Northern Ireland since September 2006. In 1991, I attained a Research Fellowship at St Mary's Hospital Medical School and Imperial College London, conducting research into new drug treatments for HIV (Human Immunodeficiency Virus). From 1994 to 2006 I worked as an HIV Consultant within the Genitourinary Medicine service at the Royal Group Hospitals Trust and was appointed Medical Director of the Royal Group of Hospitals in August 2002. In September 2006, I was appointed as Northern Ireland's Chief Medical Officer. I was appointed acting Permanent Secretary of the Department of Health and Chief Executive of Northern Ireland Health and Social Care between March and August 2009 at the request of the then Minister. In November 2014, at the request of the then Health Minister, I was appointed as Chief Executive of Belfast Health and Social Care Trust, serving until February 2017 while continuing in the role of CMO. As such I have significant relevant clinical experience with respect to emerging viral pathogens, and allied policy and healthcare leadership and management experience. This included my role in providing professional advice to the then Minister, and leading and coordinating policy and operational oversight of the public health and health service response to the 2009 H1N1 pandemic in Northern Ireland.

10.1 I am a Fellow of the Royal College of Physicians of London, and a Fellow of the Royal College of Physicians of Ireland. I have been awarded an Honorary Senior Fellowship by the Faculty of Medical Leadership and Management (FMLM) for my contribution to healthcare. In July 2021, I was made an honorary Professor of Practice by Queen's University Belfast (QUB) and awarded an honorary degree of Doctor of Medical Science for Distinction in Medicine. In March 2022 I was elected to Honorary Fellowship of the Faculty of Public Health. I was Knighted in 2021 for services to public health in Northern Ireland.

10.2 As CMO, and as a member of the Department's Top Management Group ("TMG"), I have a wide range of roles which cut across my professional, executive and leadership responsibilities within the Department and in relation to its direction and oversight of HSC organisations, which plan and deliver services for the population of Northern Ireland. The Top Management Group is the main vehicle for managing the Department on a day-to-day basis whereas the Departmental Board has oversight for monitoring the effective discharge of corporate governance. Both the Top Management Group and the Departmental Board are chaired by the Department's Permanent Secretary who is the Department's Accounting Officer. The Permanent Secretary is also the overall Chief Executive and Accounting Officer for the statutory-based health and social care bodies in NI reporting to the Minister. Exhibit INQ000137414 provides the Top Management Group's respective roles and responsibilities both before and during the pandemic and the diagram provided at Exhibit INQ000137413 sets out the Department's organisational structure at policy group level, its senior leaders, and their respective group areas of responsibility as of 1 January 2020. The senior officials and professional officers identified in the diagram comprise the Department's Top Management Group and the Departmental Board. Whilst not formally stood down during the pandemic, the frequency of Departmental Board meetings was reduced. This meant that only two meetings were held in 2020 and three meetings were held in 2021. This reduction in meetings was to permit the Department to focus on the additional workload arising from the pandemic. The Top Management Group weekly meetings were also paused from 19 March 2020 to 18 May 2020 as the Department's senior team were fully engaged in leading the emergency response. During this time, I also continued to provide professional leadership to the medical profession in Northern Ireland. In addition, I liaised with my CMO counterparts across the UK and the Republic of Ireland ("RoI") on a collaborative basis concerning public health priorities.

11. As CMO I am accountable to the Health Minister and the Permanent Secretary in the Department as the Department's Accounting Officer. My role is to provide independent professional advice to the Health Minister. While I am accountable to the Health Minister, my professional advice remains independent of political consideration or influence. The independence of this advice was in my view

understood and respected by the Minister and the Executive throughout the pandemic.

12. I am the head of the Chief Medical Officer Group ("CMOG"), including the Population Health Directorate which, at the time, included responsibilities for Health Improvement, Health Protection and Emergency Planning. Since that time, CMOG has been restructured with the establishment of a Health Protection Directorate and an Emergency Planning Resilience and Response Directorate following an internal review within CMOG. Through these Directorates, I have overall responsibility for all domains of public health policy, including health protection and health improvement, policy on emergency planning, vaccination programmes, and population health screening programmes. CMOG also includes the Pharmacy Directorate, the Chief Dental Officer and the Quality, Safety and Improvement Directorate. In addition, CMOG has policy responsibility for Serious Adverse Incident Reporting and Investigation, dissemination of guidance from the National Institute for Health and Care Excellence ("NICE") (which included Covid-19 related advice and guidance), and guidance on certification of deaths. Both prior to, during and after the pandemic, CMOG retained policy responsibility for all the domains of public health and the restructuring of CMOG did not result in new areas of policy responsibility and was designed to ensure greater balance in workload across the Directorates within CMOG. Since that time there has been and continues to be further restructuring across the Department of which I am fully supportive to better delineate professional and policy roles and responsibilities. Due to the further restructuring, from November 2023, Population Health Directorate, Health Protection Directorate, Emergency Planning Resilience and Response Directorate and Quality, Safety and Improvement Directorate are no longer part of my Group and responsibilities for these Directorates now lies within other Groups within the Department although I continue to provide professional expert technical advice to the respective policy teams. From 2008 the Department of Health, and I understand other Departments, reduced in size due to budgetary pressures with the loss of experienced civil servants. I am not able to determine whether this had a detrimental impact on pandemic preparedness or response. In my view there is no ideal departmental organisational structure and what is most important is

highly effective and functional cross departmental relationships and efficient working between professional and policy teams. As the principal healthcare professional Advisor to the Health Minister and to other Policy Groups within the Department, I lead a small team of doctors that provides professional medical advice. This is comprised of myself, two Deputy Chief Medical Officers (DCMOs), and several Medical Advisors. Together we provide advice to policy areas across the Department including primary care, secondary care, workforce, mental health, elderly care, family and children's services. In January 2020, the Department policy leads for these areas sit in other Groups within the Department including, for example, the Groups led by the Deputy Secretary of Health Care Policy Group (HPG) and the Chief Social Work Officer (CSWO) respectively. In instances where specific specialist advice is required which is outside the area of expertise of this team of Medical Advisors, my staff and I work to secure the necessary expert advice from outside the Department from HSC organisations, academia and if necessary, from outside Northern Ireland including sourcing advice from other specialist advisory groups. Other professional leads in the Department operate in the same way, including providing their professional advice to policy areas within my Group. Both DCMOs have specific policy responsibilities within my Group alongside their role as Professional Advisors. Succession planning is very difficult in small teams, as is the case in the Department generally, but particularly in relation to subject matter and professional experts. We have relatively small policy teams, and small numbers of highly qualified and experienced experts, who carry a wide range of policy and professional responsibilities. These same experts also represent NI's interests at a wide range of and multiple UK fora as we do not have the staffing complement to provide separate individuals for each forum. As only these key individuals hold the requisite knowledge, skills and expertise, and operate in key roles, the Minister, the Permanent Secretary and I rely on their judgement and professional opinion. I recognise that there are no easy answers to this resourcing issue, given the constraints around staffing and Departmental budgets, however this is a risk that the Department recognises and seeks to manage and mitigate. As CMO I do not have ultimate responsibility for decisions on Departmental priority setting or resource allocation.

13. CMOG, on behalf of the Department, Health Minister and Departmental Accounting Officer, acts as sponsor for the PHA and ensures the maintenance of effective relationships through regular engagement and formal sponsorship meetings ensuring the right balance between PHA operational independence and appropriate and proportionate oversight and governance [Exhibits INQ000408120, INQ000408121 and INQ000408122]. The PHA plays a pivotal role in the implementation of health protection policy, including emergency preparedness and pandemic response, working jointly with the then HSCB, now Strategic Planning and Performance Group (SPPG) within the Department following the transfer of the HSCB role and function into the Department in April 2022. The HSCB (now SPPG) and its senior management team, supported by the PHA in keeping with their extant role and responsibilities, played a significant role in the oversight and coordination of the wider HSC response through their role within Health Silver reporting initially to Health Gold and later to the integrated Covid-19 Gold Command Group and the Management Board for Rebuilding HSC Services. This is covered in more detail in paragraphs 32 - 36. The PHA also has a central role in population health improvement in keeping with the public health objectives as described in the NI Executive's framework for public health "Making Life Better". In addition, CMOG sponsors the Regulation and Quality Improvement Authority (RQIA) which provides regulation and assurance of HSC services. All of these areas are particularly relevant to the Inquiry. As with all public health bodies and agencies, the PHA faced significant challenges in its role in responding to the pandemic particularly given the intensity of the response required and its duration. The PHA leadership team, CMO Group and I worked very closely to provide mutual support and assistance to ensure the PHA was best placed to meet emerging and evolving challenges and the many demands faced.

14. As CMO, I have an important role in communicating with the public on key public health issues and actions that are important to protect and improve public health and wellbeing. This communication role was a crucial element of my responsibilities during the pandemic and took the form of providing advice, information and data on a range of issues including what was known about the

virus, the risk of severe disease, hospitalisation and death, and what people could do to protect themselves.

15. As CMO, I issued (as necessary) circulars and guidance to the HSC, sometimes in conjunction with the other Chief Professional Officers including the Chief Nursing Officer (CNO), the Chief Scientific Advisor (CSA), the Chief Social Work Officer (CSWO), the Chief Dental Officer (CDO) or the Chief Pharmaceutical Officer (CPO). This was done with the intention of keeping health service managers and frontline staff fully informed on developments such as testing, contact tracing, therapeutic interventions, and Non-Pharmaceutical Interventions ("NPIs"), including travel restrictions and vaccination requirements.

16. Separately from these responsibilities, I have policy responsibility for Health and Social Care Research policy and work closely with the CSA. This research was critical in informing evidence-based treatment and care during the pandemic. It is undoubtedly the case that a key learning from this pandemic in anticipation of future pandemics must be the continued investment by government in relevant and high quality clinical and scientific research.

CMO Role During the Pandemic

17. Throughout the duration of any emergency, the CMO is expected to continue to discharge the roles and responsibilities as described above at paragraphs 10 - 16 in so far as is possible. This is something which I did to the best of my ability throughout the period January 2020 to March 2022 and I continue to do so. Given the nature of the response required, my roles and responsibilities and those of CMOG changed and evolved as I assumed significant new and additional responsibilities.

18. My role, as CMO, in response to any emergency (including a pandemic) is described in detail in the Department's Emergency Response Plan ("ERP") [Exhibit INQ000184662] which was last updated in 2019 and is currently being reviewed. The full range of individual roles, structures, systems, and processes to be enacted in an emergency are defined in the ERP. The ERP describes the

roles and responsibilities of Senior Officers, (excluding the role of the Chief Scientific Advisor (CSA)), and business areas within the Department as well as the roles of various organisations which are expected to play a role in the response to an emergency. Tiers of emergency response command within the Health system are generally referred to as Health Gold, Health Silver and Health Bronze and refer respectively to the strategic, tactical and operational response to an emergency. The activation of Health Gold is the most significant response level available to the Department and once activated this will be supported by Health Silver. In line with the principle of subsidiarity, i.e. the principle that an issue should be dealt with by the most local level possible, Health Silver may be stood up without Health Gold. Health Bronze refers to the operational or Trust level response. More information on my role under the ERP is set out in paragraphs 25 - 26.

18.1 The arrangements as set out in the ERP were broadly followed throughout the pandemic. The ERP is designed to be flexible and modular and when activated the unique circumstances of the particular emergency will determine the approach taken. The ERP framework was therefore followed, however in my view was appropriately flex and adapted to include for example subject specific Covid-19 policy cells such as the subsequent establishment of the PPE Supply Cell and the CEV Cell. In my experience over a number of years and emergencies there is no ideal plan or framework and what is most important is flexible scalable capabilities which I believe was largely demonstrated in the collective cross-Departmental, cross-sectoral and HSC response to the pandemic. There were areas in the health response where this scalability was not immediately available for example with respect to diagnostic testing for Covid-19 and contact tracing. As CMO, my role beyond the first wave was increasingly and appropriately focused on the increasingly complex public health response. With the establishment of the Rebuilding Management Board and the integrated Covid-19 Gold Command Group, as described in paragraphs 34 to 35 the response moved to a more sustainable “business continuity” and “business as usual” arrangement which were then appropriately chaired by the Permanent Secretary who was also the Chief Executive of the HSC from a health and social care perspective.

19. The Chief Scientific Advisor (CSA) was appointed to the Department in November 2015, reporting to me as Chief Medical Officer. The CSA role is part time, with the total commitment equating to three days per week. During the Covid -19 pandemic the CSA role became a full-time commitment from 23 March 2020 (following the CSAs-return to work after a period of ill health) until early 2022. The CSA's role has a specific and exclusive responsibility for research and development, working closely with the PHA's Health and Social Care (HSC) Research and Development Division and HSC Trusts' Directors of Research. While the CSA is not a standing member of Health Gold Command and has no specific responsibilities for pandemic preparedness and planning, during emergencies, the CSA is required to work closely with me and other Departmental officials to provide scientific/medical/technical advice to the Health Minister, which also can form part of the Health Minister's advice to the NI Executive, to inform its decisions. Prior to the Covid-19 pandemic, most of the CSA time was spent on Research and Development. Through our recent experiences, we fully recognise the importance of formalising the CSA role and, as such, have formally included the CSA's area of responsibility in the review of the ERP 2019.

20. Departmental advisors, including myself, provide information and advice to Ministers and the Executive when required, but the constitutional position is that it is the responsibility of Ministers to take decisions. This advice role became even more important and substantial during the pandemic. Throughout the pandemic, I worked very closely with the CSA and the Deputy Chief Medical Officers ("DCMOs"), together with other professional colleagues and policy staff to provide the best possible advice to the Health Minister and, consequently, to the Executive. I regularly attended Executive meetings and was accompanied to most of these meetings by the CSA, or his Deputy, who gave presentations on the latest 'R' paper[1]. The CSA and I then answered questions posed by

[1] The basic or effective reproductive number (R) was one of a variety of data sources used as part of epidemiological modelling to support understanding of the pandemic and to assess scenarios based on the potential impact of different interventions. Other important information that was considered alongside the R number included hospital admissions, hospital bed occupancy, demands for respiratory and critical care support, and mortality data. Using the basic or effective reproduction number (R), to understand how an infectious agent may move through a.

Executive Ministers and provided additional information, when possible, to address their questions.

21. Along with the CSA, I also attended pre-Executive meeting briefings with the First Minister ("FM") and deputy First Minister ("dFM") in support of the Health Minister, on an ad hoc basis in the first few months of the pandemic and then regularly when these became more routine later in 2020. Policy decisions relating to the HSC both of a strategic and operational nature were cleared by the Strategic cell before being submitted for consideration and decision by the Health Minister and were informed by advice from respective policy and professional teams in the Department. In some instances, I would have made operational logistical decisions for example in relation to the vaccination programme in my role as Chair of the Covid-19 Vaccination Programme Board which was directly accountable to the Minister. In all such circumstances I would have advised and updated the Minister. The responsibility for the implementation of policy decisions and operational arrangements remained appropriately with HSC organisations and their respective Boards. Given the emergency nature of the initial response the Departments engagement was primarily directly with the CEOs of respective HSC organisations and the normal arrangements for engagements with the Chairs and Boards of respective organisations were simply not possible such was the pace of events. I believe with the benefit of hindsight that this did create a difficult with respect to extant accountability and governance arrangements which did then not sit comfortably with the responsibility of Chairs and Non-Executive Directors of Boards of HSC organisations. This was a point later identified and addressed as described in paragraphs 33 to 33.4 and 33.11. Apart from operational policy decisions relating to the HSC, and the vast majority of policy decisions pertaining to the test, trace, isolation policy which were made by Minister Swann as the Health Minister and the Executive was advised and informed, all other policy decisions were made formally by the Executive. I also supported the FM, the dFM and the Health Minister at meetings of COBR and in meeting four nation meetings with the Chancellor of the Duchy of Lancaster (CDL). I also supported the Health Minister in a number of other 4 Nation meetings, including those relating to international travel restrictions. In addition, I supported the FM and the dFM and the Health Minister at meetings with

counterparts in RoI. More information on the provision of advice and information during the pandemic is set out in later paragraphs.

22. My role as CMO during the initial emergency response phase of the pandemic was to lead the coordination of the health response to the impending public health emergency, recognising the significant work and contribution from many others across the Department and wider HSC system. The Department is responsible for health and social care legislation and policy in Northern Ireland. Until April 2022, the Department had 17 Arm's Length Bodies which, through functions delegated to them by the Department, helped the Department achieve its objectives. On 31 March 2022, one of those Arm's Length Bodies – the HSCB – was dissolved and its functions were transferred back into the Department. Those functions now reside within the Strategic Planning and Performance Group (SPPG) in the Department. The functions of the Department and its ALBs are often referred to by the umbrella term "Health and Social Care (HSC)" and ALBs are often referred to as "HSC bodies". These are colloquialisms and "HSC" is used as shorthand for the health system as a whole in Northern Ireland. There does not, and never has, existed an organisation called "Health and Social Care Northern Ireland". Whilst ALBs are accountable to the Department, the Department and its ALBs are separate legal entities and the ALBs are separately legally represented in all matters.

23. When a Novel Coronavirus was first reported to the WHO on 31 December 2019, it was already an infection of significance in a localised part of China. Over the first 21 days of January 2020, and then between January and April 2020, the Department faced a rapidly evolving and uncertain environment as the outbreak of Covid-19 spread rapidly to become a pandemic. On 22 January 2020, in a submission to the Minister, the Department's Health Protection Branch provided an update on the developing situation in China **INQ000103626** In addition to that submission, as I fully anticipated that we were likely to see suspected and/or confirmed cases in the UK and RoI in coming weeks, I offered to meet with the Minister to discuss the Department's preparation, planning and readiness **INQ000469766** The Department already had regular liaisons between departmental officials and counterparts across the UK

and respective UK Public Health bodies, the NHS and HSC Trusts. Indeed, there were daily conference calls at Departmental and operational level with Trusts in NI being coordinated by the PHA. The Department of Health and Social Care in England was convening daily four-nations teleconferences and, as CMO, I anticipated that a UK CMO call was imminent and therefore sought engagement with my RoI counterpart. The Minister was made aware that it was likely he would be required to participate in a call with respective UK Health Ministers to ensure that we had a fully coordinated and effective response to the management of Coronavirus across the UK. At the time the virus was evolving and causing concern, on the 24 January 2020, Minister Swann made the first of many statements [Exhibit INQ000103599] to the Assembly on the response to Coronavirus, stating that:

"…my Department, along with the PHA, are in contact with the relevant authorities across the UK to ensure that we have a fully coordinated and effective response to the management of Coronavirus. I have also been in contact with my fellow Health Ministers to discuss our approach."

23.1 At a meeting on the same day (24 January 2020) the Deputy Chief Medical Officer joined a call and was later copied into the readout [Exhibit INQ000103627] from a "National Co-ordination Call" chaired by the Department of Health and Social Care (DHSC), on the Wuhan Novel Coronavirus Incident. This was a 4 nations UK call in relation to developing situation to ensure awareness of strategic risk and ensure coordinated action. On 27 January 2020, a meeting of this group gave an update on international diagnosed cases and reported an action which required all UK Devolved Authorities to "send their figures direct to DHSC (copying to Public Health England) by 12 noon daily…".

23.2 The Department's ERP was activated in January 2020 [see Exhibits INQ000137322 and INQ000137323], with the stand up of the Emergency Operations Centre ("EOC") on 27 January 2020 in response to the developing situation and to ensure that all relevant information was appropriately shared across the Department and with the HSC. At the time the decision to stand up the Emergency operations Centre was made, the situation in Wuhan was rapidly

developing. The main responsibility of the Emergency Operations Centre was to coordinate information, in collaboration with policy leads and the wider HSC ALBs, and to provide SitReps on health and social care related matters. This involved receiving and reviewing the daily "HSC Silver SitReps" and, beginning on 20 March 2020, escalating issues to the NI Hub, which is part of Civil Contingencies Group NI, to inform the "NI SitRep." The EOC was led by CMOG and it provided and was responsible for the quality and timeliness of information critical to help inform effective decision-making and, with the volume of information that was being received, it was imperative that the EOC information management system was timely, accurate and fit for purpose. Activation early in the pandemic was in my view appropriate and enabled the Department to quickly establish information boards to aid decision-makers; that were continuously monitored and maintained throughout the duration of the emergency and kept under constant review in the light of emerging scientific evidence. Health Silver arrangements were also activated by the PHA and HSCB to coordinate the preparation and response to the developing situation across the health and social care sector. It is my understanding that the decision to activate Health Silver was made by the PHA in conjunction with the HSCB. On the 22 January the PHA wrote to me [Exhibit INQ000425510] to advise that they had established HSC Silver to coordinate the response to what was then known as the Wuhan coronavirus.

23.3 In response to the evolving situation, PHE had established an enhanced 4 nations incident response daily tele-conference and PHA health protection team were represented on the call. Cases were no longer, at this time, restricted to Wuhan and the activation of HSC Silver was to support the co-ordination of a consistent approach across NI to enable the HSC to plan and respond across a number of areas including but not limited to, identification of potential Coronavirus cases, testing, sharing of information across HSC and partner organisations, Infection Prevention and Control and PPE. Health Silver is a tripartite arrangement that can be led by the HSCB, the PHA or the Business Services Organisation (BSO) depending on the nature of the emergency the particular response required or change as the response moves into a different phase. As we moved from the containment phase to the delay phase of the pandemic, with

a greater emphasis on health service preparation and coordination for the anticipated increase in health and social care service pressures as a consequences of a significant increase in people with Covid-19, it is my understanding that it was agreed between the PHA and the HSCB that the Health Silver lead would change from the PHA (who continued to lead on the public health aspects of the response) to the HSCB who assumed the Health Silver lead supported by the PHA.

23.4 In my view the timing and rationale for the activation of HSC Silver was appropriate. Given my previous experience, I was of the view then and remain so now, that the timing of the formal activation of Health Gold was also proportionate and appropriate. These remain matters of judgement and proportionality.

24. The EOC was responsible for managing information flows, producing situation reports (SitReps) and maintaining a watching brief of the incident particularly through monitoring SitReps from Health Silver and the Northern Ireland Fire and Rescue Service.

25. The Department's ERP is modular, flexible and scalable and the EOC itself is designed to operate separately and independently of the Strategic Cell which together with the EOC comprise the Departments Health Gold arrangements. The subsequent activation of the Strategic Cell and its first meeting on the 9 March which I chaired, included the establishment of multiple subject-specific Cells (Groups) focusing on specific areas of response to the pandemic and addressing matters raised by Health Silver. As such, each of the Cell leads [see Exhibit INQ000103633] provided key leadership to areas of the response and support to me as CMO and Chair of the Strategic Cell. All of this required the ability to respond to new and complex emergent issues through the development of new processes, guidance and policies, and the ongoing review and updating of this as new evidence emerged. The principle of subsidiarity also applied within these arrangements with the subject specific policy Cells and the respective Cell leads making decisions and only where necessary, or particularly complex, complicated, or cross cutting were such matters escalated to Health Gold Strategic Cell. For example, with the expert support of Health Estates colleagues

within what was the then Properties Division within the Department of Finance (DoF), as described in later paragraphs, during Wave 1 of the pandemic the Department used mathematical modelling to establish the oxygen system capacity across NI and worked with the HSC Trusts and the regional oxygen supplier, British Oxygen Company (BOC), to coordinate and authorise a prioritised work plan to enhance the HSC Trusts' infrastructure and capacity for oxygen supplies. Given the complexity and necessary regional coordination and prioritisation of this work due to the requirement to ensure the adequacy of oxygen supply, this was escalated to the Strategic Cell and, as Chair, I sought and was provided assurance on the various elements by the Cell leads. As such, the respective leads of the subject specific policy Cells played a key role in the pandemic response and its coordination across the health service in keeping with the arrangements outlined in the ERP. As the pandemic response evolved these arrangements were flexed and scaled accordingly with the addition of further subject specific policy cells and the later development of specific directorates as described in later paragraphs.

26. The decision to activate the Strategic Cell (as part of Health Gold) was agreed at an emergency meeting of TMG which I had requested held on 4 March 2020 [see Exhibit INQ000103631]. I had requested this meeting to brief TMG members on the rapidly emerging situation, that I had determined that the Strategic Cell now needed to be activated and resourced with subject specific policy cells and the need to prepare for the impact that this would have across the Department and all other policy areas given respective roles and responsibilities. In keeping with the Department's ERP, Health Silver is designed so that it can operate separately and independently of Health Gold. As described at paragraph 23, the decision to activate Health Silver was taken by the PHA in conjunction with the HSCB and can be activated separately and entirely independently of Health Gold and appropriately in keeping with the principle of subsidiarity. The determination of the timing of activation of Health Gold by the Department was in my view appropriate as indicated in paragraph 23. Subsequently, I chaired the ERP's Strategic Cell when Health Gold Command was formally activated with the first meeting being held on 9 March 2020. The Strategic Cell is a strategic decision-making group which is usually chaired by the CMO and includes key policy leads from across

the Department. This was during the 'Emergency' phase of the pandemic which is one of the scenarios which the ERP was developed to address. By exception, another member of the Department's TMG would chair the Strategic Cell if I was otherwise unavailable. As CMO and Chair of the Strategic Cell, my role involved overseeing and seeking assurance on what in effect was the formation and foundation of the various programmes of work to coordinate the health service and public health response, many of which were required throughout the pandemic. This included dealing with a wide range of issues including but not limited to Covid-19 testing (in all of its forms), contact tracing, surveillance capacity and the capability for "surge" planning in health and social care for the anticipated health service consequences.

27. By necessity and design, the full activation of the ERP and the establishment of Health Gold Command resulted in the Department becoming directly involved in the HSC response to the pandemic, for the duration of the initial emergency response phase during the period in which Health Gold Command was in operation. This was within the parameters set out in paragraph 4.3 in the ERP which states: *"Once activated, Health Gold Command will assess the viability of critical health and social care infrastructures, including medical/clinical supply chains, stockpiles and countermeasures, and make strategic policy decisions about service delivery and surge capacity based on recommendations received from HSC Silver. Health Gold Command, in conjunction with the Departmental strategy for HSC Business Continuity Management, will manage any disruption to critical health services and assist the return to normality for the DoH and HSC organisations when pragmatic and safe to do so."* Given the associated complexity in my view entirely appropriately, Health Gold assessed the viability of critical Heath and Social care infrastructures in an ongoing and iterative approach with advice from the HSCB, PHA and HSC Trusts. This process did not result in the generation of a single assessment or review document, rather it involved ongoing reviews and updates from the policy specific Cells reporting to the Strategic Cell. The assessment of critical health and social care structures was in part informed by the information and assessment of Health Silver provided to Health Gold Command which was subsequently augmented with specific assessment and action taken by the individual Cells within the Strategic Cell

when established. This included for example, as described at paragraph 26 modelling of oxygen system capacity in NI and subsequent phased coordinate work with the HSC Trusts and BOC to enhance the HSC Trusts' infrastructure and capacity for oxygen supplies. Another example of this assessment and the subsequent action taken related to ensuring sufficient health and social care capacity and service preparation with respect to surge plans given the anticipated increased service pressures as described in paragraphs 220-229. HSC organisations including HSC Trusts, the then HSCB and PHA, BSO and RQIA continued to operate within their extant accountability and governance arrangement. The close cooperation and working between all organisations did not require the Department to sign the Emergency Powers Orders [see Exhibits INQ000188763, INQ000188764, and INQ000188765] even considering the very considerable health service pressures arising from the increases in infection over successive waves. During this period actions were being taken and decisions were being made at pace. Therefore, contact between the Department and ALBs was primarily with their Executive teams. A learning point for the future is that communication with the Boards of ALBs could have been better. However, given the pace at which events were unfolding there was a need for extreme urgency in decision making. By the summer of 2020, it became apparent that the pandemic would be protracted and require an ongoing response of long duration. Therefore, on 12 August 2020 a strategic decision was made by the Department to move from the ERP structures to business continuity arrangements with the establishment of new associated governance arrangements as set out in paragraphs 33 - 36.

28. Throughout the time when the Department was most directly involved in the wider HSC sector's response, this was implemented in partnership with a wide range of Arm's Length Bodies (ALBs), organisations and service providers for example across primary care, dental care and adult social care. During this time the Department's direct involvement operated as several levels:

a) leading the coordination of planning of the HSC response to the pandemic at the regional level with respect to surge planning;

b) leading the development of policy and guidance related to the work of the various cells operating within Health Gold;
c) monitoring the impact of the pandemic on the delivery of HSC services and when required initiating agreed measures to mitigate;
d) coordinating the management and approval of funding allocated to the HSC to combat the pandemic and;
e) coordinating the regional response to HSC workforce pressures.

29. While in keeping with the principle of subsidiarity, most regional operational matters were addressed at Health Silver or in liaison with the specific policy Cells when matters were escalated to the Strategic Cell due to, for example, their complexity or a policy or resourcing implication, it was my role to work with the subject specific policy Cell leads to ensure the said matters were resolved. Many actions were taken to plan for and address the anticipated future health service pressures. For example, service works to increase physical bed space, including the redesignation of existing hospital facilities and work to improve the resilience of the oxygen supply to hospitals.

30. In all of this, my objective and the work of the Department and the HSC, coordinated by the Strategic Cell, was to seek to ensure a balance in the need to create the capacity to manage the anticipated additional health service pressures of Covid-19 while changing how care was provided for other conditions so that in as far as possible other non-Covid-19 services could be maintained. Measures were put in place by HSC Trusts to reduce the risk of infection to individuals and staff, and also to reduce the risk of outbreaks in health settings, whilst at the same time ensuring that the population could still access the health service as necessary.

31. A range of specific NPIs were introduced in HSC services, including social distancing, enhanced ventilation and environmental cleaning, the use of appropriate setting specific PPE, pre-admission testing, quarantining before elective procedures, the introduction of routine asymptomatic testing of staff, and the provision of specific guidance for healthcare workers on self-isolation if they tested positive for Covid-19. These measures were reviewed and updated as the

situation evolved with changes in clinical management, in response to surges in demand and other healthcare needs and changes in IPC practice. Later in the pandemic with the development of new treatments and the deployment of the Covid-19 vaccine the dynamic risk assessment changed further, and the focus shifted to the recovery of health services to a more normal way of working, however even before the end of the first wave there was a focus reestablishing services that had been temporarily pause. An essential element of the health service preparation was service adaptation to ensure the continued access to emergency and essential services, including general practice, dental services, maternity and children's services, cancer services and screening services for high-risk conditions. This involved, for example the development and implementation of alternative service models such as Covid-19 Centres, virtual general practice and hospital consultations, the establishment of urgent dental care centres, including treatment pathways for those with cancer, given their increased risk from Covid-19. All these pathways and new service arrangements progressed and were coordinated by Health Gold Command Strategic Cell with proposals from policy specific Cells and Health Silver. Despite the considerable efforts by the HSC, there was regrettably a significant impact on non-urgent elective activity and a range of other planned services, including routine screening programmes and support services. Extensive efforts were made to provide as many of these services by alternative means as possible, while minimising the risk of infection.

32. As the pandemic response evolved and it became apparent that this pandemic was to be of lengthy duration requiring a prolonged and long term response from the Department, as described in paragraphs 33 - 35, I identified the need to modify and expand the Strategic Cell arrangements to cover more Covid-19 specific areas of work when it became clear that a dedicated resource was required for example as described at paragraphs 117 and 118 and my establishment in October 2020 of a Clinically Extremely Vulnerable (CEV) Operational Cell or to develop more long term sustainable arrangements. This is entirely consistent with the ERP to ensure an agile and flexible response and was an aspect of the continuing development of the response that I coordinated. In addition, this included the establishment of several Covid-19 Oversight Boards to

manage the public health response which I chaired, for example: NI SMART (Systematic, Meaningful, Asymptomatic, Repeated Testing) Programme Board; Test, Trace, Isolate, Protect Strategic Oversight Board; Covid-19 Vaccination Programme Oversight Board; Covid-19 Therapeutics Oversight Board; and the establishment of the International Travel Directorate within CMOG. It was also necessary to review the Department's approach to address the situation of a prolonged pandemic response and to transition arrangements from the immediate emergency response into a more sustainable 'business continuity' model as it became clear that the pandemic response was likely to be for a sustained period of time and EPB needed to be ready to deal with any other emergent emergency situations.

33. During the first wave of the pandemic, the structures in place to oversee the Department's response were those described in the ERP. In preparation for anticipated subsequent "waves" of infection, I commissioned an 'in flight review' of these arrangements to critically appraise their effectiveness and appropriateness for a more sustained pandemic response. I recognised that the structures as described in the ERP and in place during the first wave were not designed for a longer term more sustained response and what I fully anticipated would be future waves. In my view there was a fundamental need to move to more sustainable business continuity model arrangements as in effect the response to the pandemic and mitigating its consequences became the main focus of the entire Department and the HSC. There were also significant vulnerabilities should any other concurrent emergency have occurred with a continued reliance on the ERP arrangements which would then not have been available to respond appropriately. This is an important learning point for the future to ensure that in any future prolonged response there is not an undue or prolonged reliance on the ERP arrangements. This review was carried out by two individuals with extensive experience in emergency planning and response and reported on 23 April 2020 [Exhibit INQ000188799]. The main findings of the review were:

- Maintain the Gold- Silver-Bronze Structure to coordinate the response for the immediate to-72-hour operational horizon and to maintain and develop the flow of current service level information;
- Institute a Programme Management structure that would provide governance arrangements and create a system of assurance with regard to regional preparedness while ensuring that a system-wide approach to co-ordination;
- Develop a joint Programme Support Office & Situation Room in the Department that would develop common approaches to key documents and maintain a record of work and decisions;
- Manage critical risks by the formation of enhanced structures to ensure joined-up working.
- Consider reconfiguring governance arrangements and forming an independent oversight group.
- Enhance staff engagement across the whole system by better internal communication and the opportunity to hear from leaders.
- Promote staff wellbeing through a system-wide wellbeing approach to provide "self-service" resources for all staff.
- Introduce a rota/buddy system to enable a 7-day service provision but allow appropriate rest & recovery to ensure personal resilience is maintained.
- Increase or introduce tools to promote remote working, for example collaboration products and communication tools such as Microsoft Office.
- Disseminate appropriate training and good practice advice to support a reduction in the volume and appropriate management of emails.

33.1 Following the receipt of the report on 23 April 2020 there was a series of internal discussions which ultimately prompted the recommendation to stand down first the strategic cell in June 2020 and then the EOC in August 2020 at the end of the first wave of the pandemic and to move to the new arrangements. In my view this strategic decision was appropriate and taken with the approval of the Health Minister, and he approved the establishment of a new temporary Management Board for Rebuilding HSC Services. I was a member of the Board, which was chaired by the Permanent Secretary, and I provided professional advice and support. If I was not in attendance due to other commitments including supporting the Health Minister at the Executive or other meetings, I was, in most

instances represented by a DCMO. These new arrangements are described in more detail in paragraphs 35 and 36. The Strategic Cell was stood down in June 2020 following the decision taken by the Department to establish the new temporary Management Board for Rebuilding HSC Services. Alongside the embedding of the Management Board, the Department revised the arrangements for managing the Department's response to the surges in demand for HSC services from Covid-19 patients. The new arrangements involved the establishment of an integrated Covid-19 Gold Command Group, which largely replaced the Strategic Cell, consisting of senior Departmental officials, alongside senior Health and Social Care Board and Public Health Agency officials. The integrated Gold Command Group met for the first-time during the Second Wave on 29 October 2020 [Exhibit INQ000276293] and held its last meeting on 4 March 2022 [Exhibit INQ000276294]. It was chaired by the Department's Permanent Secretary. Over the summer months of 2020 the Department's response to the pandemic was focused on the rebuilding of services, overseen by the Rebuilding Management Board, while the Health Gold cells responsible for managing the policy response to surges in demand remained in a state of readiness in the event of any further surge during this period.

33.2 A Departmental Covid-19 Operations Centre, which replaced the Emergency Operations Centre, was established within the integrated Gold Command Group's Surge Directorate. The Permanent Secretary's memo of 22 October 2020 [Exhibit INQ000276292], provides additional information about the Departmental Covid-19 Operations Centre. The Department's Top Management Group established a project in May 2020 to assess the impact of Covid-19 on HSC services delivery to inform the production of a 'Rebuilding HSC Services Strategic Framework'. The main impact on services was a downturn in activity resulting in increased waiting times to access services. The project aimed to prioritise the services, projects and programmes that should be resumed as Covid-19 patient numbers began to stabilise. The project also recommended changes to the HSC governance arrangements to make these as efficient as possible within the challenging situation for service delivery arising from the pandemic. The changes to the governance arrangements were also informed by the findings of a series of reviews, including:

a) An 'in-flight' assessment of the Health & Social Care service coordination in response to the pandemic [Exhibit INQ000188799], which reviewed the Department's emergency management structures.
b) A debrief of Health Silver, organised and facilitated by the Health and Social Care Board [Exhibit INQ000188798].
c) A review of the Emergency Operations Centre, established by Emergency Planning Branch, to engage with key stakeholders to examine its effectiveness internally as well as how it interfaced with the Northern Ireland Hub and Health Silver [Exhibit INQ000188797].

33.3 The normal governance arrangements for Health and Social Care in NI are set out in the HSC Framework Document [Exhibit **INQ000103721**], published by the Department in September 2011, to meet the statutory requirements placed upon it by the Health and Social Care (Reform) Act (NI) 2009. The Framework Document describes the roles and functions of the Department, its HSC Arm's Length Bodies and the systems that govern their relationships with each other and the Department. The Department's Emergency Response Plan 2019 [Exhibit INQ000184662] sets out the governance arrangements for the Department's response to emergencies for which it had been designated lead. The Plan also sets out the arrangements and structures which underpin the Department's role in providing strategic health and social care policy advice and/or direction in support of the efforts of others, including its associated agencies and ALBs in response to emergencies for which it had been designated lead. During previous emergencies, when the Emergency Response Plan was activated, the normal governance arrangements set out in the Framework Document continued to operate during the emergency.

33.4 In their in-flight review report the Reviewers suggested (on pages 11 and 12): "that the Department consider if the normal governance arrangements remain suitable in the current circumstances. They do not appear to be a comfortable fit with the command & control environment that is currently operating nor with the suggested model if that was instituted." It is the Department's view, with which I agree, that the Reviewers were referring to the "command and control

environment" which emanated from the Health Gold decision-making structures and processes set out in the Department's Emergency Response Plan during the initial months of the pandemic. The Department activated Health Gold Command on 9 March 2020. From this date the primary focus of the Department's governance of the HSC system (set out in the Framework Document) therefore changed from the oversight and management of the planning and delivery of routine health and social care services, to combining this with the planning and implementation of services designed to alleviate the impact of the pandemic on the HSC. The Health Gold structures and processes (set out in the Emergency Response Plan) were designed to manage emergencies with a duration of days or weeks rather than the emergency situation of months and years resulting from the Covid-19 pandemic.

33.5 The Health Silver debrief was facilitated to inform the overarching Departmental debrief. The debrief took place over two sessions: session one being the 'Contain' phase which had been led by Public Health Agency, and session two was the 'Delay' phase which had been led by Health and Social Care Board. Attendees from the three organisations that make up Health Silver attended both sessions – the HSCB, PHA and BSO. The report of session two was shared with the Department in September 2020 [Exhibit INQ000188798]. At the time of writing, we have been unable to locate any record of the Department having received the Public Health Agency's report on session one, the 'Contain' phase, and therefore the information below relates to the report of the Health and Social Care Board on session two, 'Delay' phase. The structure of the event was a series of questions posed and discussed with attendees, facilitated by the Emergency Planning leads of the Public Health Agency and the Health and Social Care Board. Topics which were discussed included:

- What went well;
- What could be changed/improved;
- Whether roles and responsibilities were clearly understood;
- Adequacy of staffing and resources;
- Communication with the Health and Social care sector (Silver/Department of Health);

- Reporting (Battle Rhythm)/Meetings structure and frequency;
- Data availability/SitReps;
- Decision Making – Silver/Gold (to include timeliness);
- Governance- Leadership and Accountability, and
- Key challenges moving forward.

33.6 The report of session two recognised that many of the areas that gave rise to concern early in the pandemic (staffing, SitReps, reporting/battle rhythm) were rectified as the response to the pandemic evolved. For example, staffing was highlighted as inadequate at the beginning with over-reliance on a select few members of staff, but this improved from March 2020 following the establishment of a core team which ensured a seamless flow of information on a daily basis. Sitrep formats were also revised and developed to take account of the developing situation and changing demands for information. In a similar vein, the reporting/battle rhythm developed over time, with the timing of daily meetings adjusted to ensure key issues could be escalated on the same day to Health Gold.

33.7 The report identified a number of areas where changes and improvements could be made, for example to ensure lines of communication were clearer and to reduce parallel working.

33.8 The report of the Health Silver debrief session two [Exhibit INQ000188798] included a series of recommendations. At the time the report was shared, in September 2020, the Department, the HSCB, PHA and BSO remained heavily involved in managing the ongoing pandemic response with ongoing capacity issues. There was therefore no opportunity for the organisations to meet to reflect on the findings from the Health Silver sessions, to review the report, make corrections, develop a shared understanding, or to specifically discuss the points raised and how to address them. However, the Department had in many cases identified similar issues, informed also by the review of the Emergency Operations Centre and the 'In flight' review discussed also in this section, and took account of these in developing the approach to the next wave of the pandemic [Exhibit INQ000188797]. For example, the temporary "Management

Board for Rebuilding HSC Services" (established in June 2020) and the integrated Covid-19 Gold Command structures (established in autumn of 2020) to manage the second wave of the pandemic recognised the point made in the Health Silver debrief session two report that Covid-19 was no longer an 'emergency' but rather it needed to be incorporated into a new way of doing business. The structures that replaced Health Gold took a more integrated approach than had been taken during the initial emergency response phase, with subject specific cell membership drawn, not only from the Department, but also from counterparts in the HSCB, PHA and BSO. In my view this adaptation was entirely appropriate.

33.9 Following the stand down of the Emergency Operations Centre (EOC), the Emergency Planning Branch established a review team to engage with key stakeholders to examine the effectiveness of the EOC internally as well as how it interfaced with the Northern Ireland Hub and Health Silver. Two separate questionnaires were developed: one online survey for all staff who had completed a shift in the Emergency Operation Centre [Exhibit INQ000353603] and one questionnaire which was sent to key staff who had interacted with the Cell including Departmental policy leads and senior staff as well as the Northern Ireland Hub and Health and Social Care sector [Exhibit INQ000353604]. There was also a debrief session for core Cell staff, including press office and senior medics. The overall themes explored were:

- Incident response;
- Strategic and policy/subject-specific cells;
- Communication;
- Governance, and
- People and skills.

33.10 The scope of the findings in the Lessons Learnt Report ranged from 27 January 2020 to 30 July 2020. A total of 20 lessons and recommendations were identified during the review period [Exhibit INQ000188797]. The majority of the lessons identified were around early engagement with key partners on situational awareness as the emergency evolved, establishing good communications

internal and external to the Department, specifically in establishing effective reporting rhythms and developing accurate, timely and relevant Situational Reports from Health and Social Care and Departmental Arm's Length Bodies. Other lessons covered training, resources and defining responsibilities for managing Personal Protective Equipment during a pandemic, including when and how the emergency stockpile is to be used. These lessons and recommendations are all being considered by the Department's Emergency Planning Branch and are being incorporated into the next iteration of the Departmental Emergency Response Plan, currently in progress.

33.11 The routine governance arrangements generally worked well under the normal non-pandemic operating environment. Difficulties with the suitability of the normal governance arrangements (set out in the Framework Document) arose from sustaining normal governance, which operated on the basis of an annual planning cycle, alongside a command and control approach to governance (as detailed in the Emergency Response Plan) in response to the initial dynamic fast moving months of the emergency which often required rapid decision making. Normal governance involved the administering of HSC bodies by statutorily appointed management boards, which remain ultimately accountable to the Department for the discharge of their respective functions set out in the Health and Social Care (Reform) Act (NI) 2009. The system of administration operated on the basis of an annual Commissioning Plan Direction, setting out the Minister's priorities for the delivery of services, from the Department to the HSCB which in turn produced an annual Commissioning Plan for the HSC bodies. During the period April to May 2020 the Department's Top Management Group therefore recognised that a new temporary governance model would be needed to oversee the HSC system during the period of the ongoing pandemic. This required striking a balance between the emergency governance arrangements introduced to mitigate the impact of Covid-19 on the HSC system, allowing these to be escalated and de-escalated in line with the projected trajectory of the pandemic; and modifying the normal governance arrangements for the oversight of HSC routine service delivery. This involved marshalling all available Departmental and HSC resources to work together across organisational boundaries, directed via a combination of command and control, when necessary,

alongside the incremental rebuilding of routine service delivery. These new arrangements, which were stood up June 2020 at the same time as the Emergency Operations Centre was being stood down, ensured a sustainable and inclusive approach to decision-making during this difficult, protracted and unprecedented period.

33.12 The Deputy Secretary of the Healthcare Policy Group, briefed the Minister on the outcome of the project which proposed a change in the HSC governance arrangements to introduce a new business model to oversee the recovery of HSC services, following the initial surge of the Covid-19 pandemic [Exhibit INQ000130385]. The new business model would require amending the HSC Framework Document [1] (the Framework Document) [Exhibit INQ000188742] to establish new temporary governance arrangements and a new temporary Management Board. Both measures were required to facilitate and provide direction for the rebuilding of HSC services and to oversee planning of service capacity for any potential further waves of the pandemic and/or local outbreaks.

33.13 Officials proposed that a Memorandum [Exhibit INQ000103722] to the Framework Document should be published setting out the temporary changes to the governance arrangements, constituted by the establishment of the Management Board for Rebuilding HSC Services, for a period of two years with effect from June 2020 and to be kept under review. It was proposed that the two years period would be followed by a consultation on substantive and longer-term changes to the Framework Document, reflecting both learning from this period, and the dissolution of the Health and Social Care Board which was expected within this timescale.

33.14 The new temporary Management Board for Rebuilding HSC Services was established in June 2020 and reported directly to the Minister. It was given the responsibility for providing oversight and direction to the HSCB, Public Health Agency, the HSC Trusts and the Business Services Organisation on the implementation of the Department's 'Strategic Framework for Rebuilding HSC Services' (see paragraph 616 below). The Management Board would not exercise any other authority in relation to the statutory duties, roles, and

responsibilities, as specified in the Framework Document, which the Department has delegated to the Health and Social Care Board, the Public Health Agency and a number of other HSC bodies.

33.15 The submissions suggested that the Management Board would be chaired by the Department's Permanent Secretary and its membership would be drawn from the Department's senior officials and other senior staff from across the HSC. The Minister could also request additional expert advice from existing Departmental external stakeholder groups, as required, on the implementation of the Strategic Framework.

33.16 The submission went on to recommend that the Minister should direct the Health and Social Care Board, the Public Health Agency, HSC Trusts and the Business Services Organisation that for the two year period commencing in June 2020 they were to prioritise their service planning, delivery, and deployment of resources to stabilise and restore service delivery as quickly as possible by achieving the right balance between delivering Covid-19 and non-Covid-19 activity.

33.17 In pursuance of this priority the Department's HSC Commissioning Plan Direction, the Health and Social Care Board's Commissioning Plan and associated Service and Budget Agreements for the 2019/20 financial year would be rolled forward into the years 2020/21 and 2021/22 and updated to reflect Departmental budget allocations in each of these years. Individual HSC Trust Delivery Plans for 2020/21 and 2021/22 should also prioritise activity designed to stabilise and restore service delivery as quickly as possible at the level of local commissioning and through regional collaboration with other Trusts guided by the Department's 'Strategic Framework for Rebuilding HSC Services'. The performance targets set out in the Commissioning Plan Direction, Service and Budget Agreements and Trust Delivery Plans for the financial year 2019/20 would be reviewed by the Department to determine the optimum method for assessing the performance of HSC Trusts in the delivery of services during the period of the Covid-19 emergency in the years 2020/21 and 2021/22. The Minister agreed to the above proposals. He also agreed amendments to the terms of reference for the Minister's attendance at the Management Board for Rebuilding HSC Services

and the basis for seeking expert input to the Board in a further submission dated 5 June 2020 [Exhibit INQ000137398].

34. The Management Board for Rebuilding HSC Services established in June 2020 had oversight for both Covid-19 and non-Covid-19 activity including the various strategic policy strategic cells that had previously reported into the Strategic Cell of Health Gold, and sat within the EOC structure, and more specifically the health service operational coordination work of the Strategic Cell. As such the health service operational oversight and coordination role of the Strategic Cell was replaced by the newly established Management Board [Exhibit INQ000137342]. The Department's response to Covid-19 had now moved beyond the arrangements described in the ERP and was in effect being absorbed into a more 'Business as Usual' model, with a substantial portion of the staff within the Department continuing to be repurposed to work routinely as part of the Covid-19 response within their respective policy teams. This Management Board remained in place for a period of two years. The last meeting of the Strategic Cell was on the 16 June 2020 as the Department moved from the emergency phase of the response to these new business continuity arrangements. After the Strategic Cell and EOC was stood down, as CMO I continued to lead and coordinate the wider public health response to the pandemic through a number of "Oversight Programme Boards" and formal meetings, for example those overseeing the roll out of the Covid-19 vaccination programme, the NI SMART Covid-19 Community Testing Programme and the Covid-19 Therapeutics Oversight Board with respect to new Covid-19 treatments.

35. Alongside the Management Board, the Department revised the arrangements for managing the Department's response to further surges in service demand pressures as a consequence of Covid-19. These new arrangements involved the establishment of an integrated Covid-19 Gold Command Group, which consisted of senior Departmental officials and senior HSCB and PHA officials. The Covid-19 integrated Gold Command Group was activated from autumn 2020 and remained in place throughout the second and third waves of the pandemic. It was also chaired by the Department's Permanent Secretary.

36. From summer 2020 to May 2021 the Management Board, operating through a number of workstreams, played the central role in planning and directing the Department's approach to rebuilding HSC services. In autumn 2020, in anticipation of the further surges expected over the winter months of 2020/21, the Department, introduced a business continuity approach to managing the emergency response to the pandemic by establishing an integrated Covid-19 Gold Command Group as described in paragraph 35. The Management Board and the integrated Covid-19 Gold Command Group consisted of senior Departmental officials, alongside senior HSCB and PHA officials. The Chief Executives of the six HSC Trusts and the Chief Executive of the Business Services Organisation were also members of the Management Board. Following an internal review in spring 2022, the Management Board was stood down and replaced by the HSC Performance and Transformation Executive Board which was established in June 2022 as part of the new governance arrangements for the Transformation of Health and Social Care services. The integrated Covid-19 Gold Command Group was finally stood down on 4 March 2022 towards the end of the third wave of the pandemic.

37. In due course, and particularly with the roll out of the vaccination programme and greater levels of population immunity, the strategic focus of the Department with respect to the HSC shifted to the reopening of services under the Rebuilding Management Board, while ensuring proportionate infection prevention control measures were in place to protect patients and staff. Relevant guidance and advice were updated at that time This was not an area for which I had direct responsibility as it was within the remit and responsibility of HSC Trusts with advice and guidance provided by IPC Cell within the PHA, which sought additional professional input primarily from CNOG and as required from one of my DCMOs. However, I am aware that the Department's corporate statement for Module 3 contains a section on IPC. However, even towards the end of the first wave and certainly by July 2020 when the number of people with Covid-19 was at low levels, the Department, the HSCB, PHA and the HSC Trusts were making efforts to reestablish as much routine care as possible. As described at paragraph 33.14, this strategic shift in focus was under the oversight of the Rebuild Management Board chaired by the Permanent Secretary which had been

established in June 2020 and of which I was a member. At that time the Department published an HSC Strategic Rebuilding Framework and each Trust published a rebuilding plan based on a 3 month planning cycle, although these were subsequently interrupted by the onset of Wave 2. In addition, transformation work was rolled into rebuilding with projects such as elective day case centres being fast tracked to seek to improve access to clinical care. At this later stage in the pandemic, it was essential to ensure that the risk of infection and outbreaks was balanced with the need for the public to access health services. It was recognised that the combination of wider behavioural change and changes in health seeking behaviours by the public, along with changes in access to services, was in and of itself creating potential harm through delays in treatment and care which could have potentially impacted upon outcomes. During this period, I commissioned from the PHA (with input from the HSCB (now SPPG)) a timeline for the full reestablishment of all screening services and requested regular updates on progress [see Exhibits INQ000276322, INQ000276323, INQ000276324 and INQ000276325]. The responsibility for ensuring there were ongoing dynamic risk assessments to ensure that proportionate IPC measures were in place, while also considering the wider risks to patients of any restrictions to or access to care, remained with the HSC Trusts. The HSC Trusts approach, as previously indicated, was informed by NI guidance produced by the IPC Cell in the PHA with further professional advice being provided as required by the Chief Nursing Officers Group (CNOG) in the Department and from professional colleagues within CMOG.

37.1 Infections acquired within a health and social care setting were a major cause for concern and as described as paragraph 53 were closely associated with the level of community transmission. On 7 September 2020, the Minister informed the Northern Ireland Assembly that a Serious Adverse Incident learning review would be undertaken of Covid-19 cases and outbreaks which occurred in hospitals in the Southern Health and Social Care Trust [Exhibit INQ000417466]. An Independent Panel was established by the Southern Health and Social Care Trust and the Public Health Agency to undertake this Serious Adverse Incident learning review. The panel comprised senior medical consultants in care of the elderly, haematology and microbiology, an independent senior nurse consultant

with expertise in infection control, a consultant representative from the Public Health Agency and a lay representative.

37.2 On 16 September 2021, the Minister announced that the Southern Health and Social Care Trust had received a copy of the Independent Panel's draft report related to the Covid-19 cases and outbreaks which tragically led to the deaths of 15 patients within the Southern Health and Social Care Trust's hospitals between August and October 2020 [Exhibit INQ000383083]. In his statement, the Minister advised that this draft report was to be shared with the 32 families impacted by these outbreaks at that time, and with the former Health and Social Care Board (now the Strategic Planning and Performance Group in the Department). With work subsequently completed in 2022, the final report of this learning review was shared with the service users and families affected. On 28 September 2023, the Southern Health and Social Care Trust published the final report of the review of clusters of Covid-19 cases which occurred in 2020 in both Craigavon Area Hospital and Daisy Hill Hospitals [Exhibits INQ000417468, INQ000088724, INQ000090419, **INQ000417473** and INQ000417474]. The final report contained important findings and recommendations regarding the prevention, control, and treatment of Covid-19 in the hospital settings. The Southern Health and Social Care Trust confirmed it would carefully consider the report and its recommendations, involving families in this process. The Department welcomed the publication of the final report which contained recommendations for strengthening infection, prevention and control measures in the hospitals, as well as the systems for overseeing and assuring best practice across Health and Social Care in Northern Ireland [Exhibit INQ000417469].

37.3 On behalf of the Department, I engaged directly with the Interim Chief Executive of the Regulation and Quality Improvement Authority about plans to introduce a series of Infection Prevention and Control focussed inspections of health and social care Acute and Independent Hospitals across Northern Ireland. Between September and December 2020, the Regulation and Quality Improvement Authority inspected a total of 13 hospitals (11 Acute hospitals across the five Health and Social Care Trusts and 2 hospitals within the Independent Sector), producing individual inspection reports for each hospital inspected. Using an

inspection framework drawing from a range of best practice sources in the management of Covid-19, the Regulation and Quality Improvement Authority inspected both clinical and non-clinical areas of the hospital sites visited. The Regulation and Quality Improvement Authority also spoke with staff at all levels and engaged with patients and visitors to obtain an understanding of their experiences when using the services. During the inspection process, any issues of note or concern identified by the Regulation and Quality Improvement Authority were raised in real time with the relevant organisation and also referenced in the individual hospital inspection reports. To support the sharing of learning across the wider healthcare sector the Regulation and Quality Improvement Authority also published an overall report "COVID-19 HSC and Independent Hospital Inspections - Emerging Learning" on 18 December 2020, setting out the key thematic findings and opportunities for improvement identified during the series of hospital inspections [Exhibit INQ000398911].

37.4 Health and Social Care Trusts experienced particular challenges with the emergence of healthcare associated Covid-19 infections. Whilst there were measures in place to minimise the transmission of Covid-19 in healthcare settings, I recognised that as we progressed through the winter months with hospitals under increased pressure with Covid-19 and non-Covid-19 admissions, those measures alone may not be sufficiently effective. It is within that context in December 2020 that I established a regional Nosocomial Support Cell as part of the Department's approach to supporting the Health and Social Care Trusts to address the challenges arising from Covid-19 infections in healthcare settings [Exhibit INQ000185385]. The key objective of the Nosocomial Support Cell was to provide multidisciplinary support to the region and Health and Social Care Trusts experiencing clusters or sustained complex outbreaks of healthcare associated Covid-19 infections in acute settings. The work programme for the Nosocomial Support Cell included:

- The development and introduction of a regional nosocomial dashboard, an important information management tool, utilised by all relevant Health and Social Care organisations to support the oversight and operational management of Covid-19 incidents and outbreaks;

- The completion of a programme of learning visits to acute hospitals, by a team of experienced healthcare professionals, with a focus on identifying and sharing learning and supporting best practice to prevent and control transmission of Covid-19 infections in hospital settings, and
- The development of a region-wide approach to reviewing and learning from deaths associated with hospital-acquired Covid-19.
- The Nosocomial Support Cell had a key role in enabling quick and effective sharing of lessons learned including that arising from risk assessment and management of significant clusters and outbreaks (as they arose), and the associated implementation of best practice to contain and prevent the spread of Covid-19 in hospital settings. As my request, the Nosocomial Support Cell was chaired by Dr Anne Marie Telford (a past Director of Public Health in Northern Ireland), supported by the Deputy Chief Medical Officer. Membership included the Department, the Public Health Agency, the former Health and Social Care Board and other healthcare Professionals as appropriate.

37.5 During the summer of 2021, having completed its planned programme of work, the support function initially provided through the Nosocomial Support Cell moved to the Public Health Agency, and the Nosocomial Support Cell transitioned into a Regional Health Care Associated Infection (HCAI) Working Group, also referred to as the 'HCAI, Regular Testing and Outbreak Group'. The regional nosocomial dashboard, developed by the Cell, was an important information management tool which continued to be utilised by all relevant Health and Social Care organisations to support the oversight and operational management of Covid-19 incidents and outbreaks. The dashboard facilitated prompt access to timely information on nosocomial Covid-19 infections within and across hospitals in Northern Ireland. Each Health and Social Care Trust received a summary report following the learning visits completed by the Cell's Visiting Sub-group, including the Southern Health and Social Care Trust [Exhibits INQ000417482, INQ000417483, and INQ000417484]. These reports were an important source of timely feedback to Health and Social Care Trusts on the approach and systems operating in their respective hospitals to address and mitigate the impact of Covid-19 as it emerged in the acute hospital sector.

38. As CMO, I continued to provide strategic leadership and coordination of the increasingly complex elements of the public health response working closely with colleagues in the PHA through a number of "Covid-19 Oversight Boards" for example those overseeing the roll out of the Covid-19 vaccination programme, NI SMART Covid-19 Community Testing Programme and the use of new Covid-19 therapies. as described in later paragraphs. I continued to provide professional advice and support with DCMO colleagues as necessary to the newly established Rebuilding Management Board and the integrated Covid-19 Gold Command Group arrangements. In addition, I established, through the support of colleagues who released resources previously targeted on other tasks and with the agreement of the Permanent Secretary, three new directorates within CMOG. The Covid-19 Strategic Directorate was established in June 2021 with responsibility for liaison with UKHSA and Waste Water Covid-19 surveillance. The Covid-19 Response Directorate was established in October 2020 to oversee all aspects of Covid-19 testing and contact tracing, including liaison with the National Testing Programme led by the Department of Health and Social Care. The International Travel Directorate was also established, and it led on the arrangements for the introduction and review of the international travel restrictions. In addition, the CSA and I continued to provide ongoing advice to the Health Minister and Executive as to the necessity, appropriateness, and proportionality of statutory and non-statutory NPIs as part of the monthly review of the restrictions and the risks associated with any proposed easements. These latter responsibilities are described further in later paragraphs.

39. As previously described in paragraph 25 the EOC as part of the Health Gold arrangements is designed to operate independently, without the activation of the Strategic Cell. The EOC therefore was stood up before the Strategic Cell and continued to operate after the Strategic Cell was stood down in June 2020. Its operational hours changed throughout the period as required. The EOC also reduced the frequency of Health Gold SitReps as Covid-19 cases declined and the scaling back of both the NI Hub and the DHSC Whitehall responses to the pandemic following the first wave. During this period, the EOC maintained its full operational readiness to deal with any further waves of Covid-19 or any other

concurrent civil contingency emergencies that might arise. The EOC was stepped back to a soft stand-up on 15 June 2020 until it was finally stood down on 11 August 2020. A Departmental Covid-19 Operations Centre replaced the EOC and was established within the integrated Covid-19 Gold Command Group's Surge Directorate as outlined in the Permanent Secretary's memo of 22 October 2020 [see Exhibit INQ000276292].

40. Following the formal stand-down of the EOC as described in greater detail at paragraphs 33.9 and 33.10, the Department's Emergency Planning Branch established at my request a review team to engage with key stakeholders to evaluate the EOC's internal effectiveness and how well it interfaced with the NI Hub and HSC Silver during the early response phase of the pandemic. Two separate questionnaires were developed: one survey for all staff who had completed a shift in the EOC and one for key staff who had interacted with the EOC, including Departmental policy leads and senior staff, as well as the NI Hub and HSC. The time frame of the findings in the Lessons Learnt Report range from 27 January to 30 July 2020. A total of 20 lessons and recommendations were identified during the review period, the majority of which have been incorporated into the next version of the Departmental Emergency Response Plan, which will be completed before the end of 2023. This work will enable the Department to enhance and develop its preparedness, response and recovery to any future health emergencies for which it is designated Lead Government Department (LGD) [see Exhibit INQ000188749].

41. The Department continued the management of the Covid-19 Dashboard which was the primary vehicle for the collation and dissemination of all official pandemic-related data and analysis. In order to collect relevant and standardised data from HSC Trusts, the HSCB and PHA, a Data Coordinating Group was established on 18 March 2020 in the Department chaired by the Principal Statistician in the Information and Analysis Directorate in the Department. This information was primarily used to create analyses and statistics for publication on the Department's Covid-19 Daily Dashboard of Statistics. In addition, the PHA continued to produce a range of public updates and reports including data on the operation of the Contact Tracing Service, data on clusters and outbreaks

including those in care homes. Later in the pandemic a new public facing Vaccine Management System (VMS) was introduced to allow the recording of all Covid-19 vaccines administered in General Practice, Community Pharmacy and in Trust Vaccination Centres.

Professional Advisory and Policy Role of the CMO as it evolved.

42. As described over the course of the pandemic the focus of my role and responsibilities changed from the Emergency response phase of the pandemic in the first wave, as we moved into the business continuity phase in the second and third waves. In the first wave, as chair of the Department's Strategic Cell, I coordinated the public health and health service preparation and pandemic response during the first wave with the support of the leads of individual policy Cells and professional and policy teams across the Department. The Strategic Cell met formally for the first time on 9 March 2020 [Exhibit INQ000103632] in response to the growing threat to NI from the virus. It had regular meetings and operated for the first four months of the pandemic during the initial emergency response phase of the pandemic. It held its last meeting on 16 June 2020. The Strategic Cell was chaired by me or a deputy from the Department's Top Management Group. The meetings were conducted on the basis of a set agenda. The membership of the Strategic Cell included Top Management Group senior officials and the Department's professional officers from the medical, nursing and social care disciplines. The diagram provided at [Exhibit INQ000103633] provides the overall organisational structure for Health Gold Command which was comprised of the Strategic Cell and of 13 subject-specific policy cells. The remit and staffing for each of these policy cells is provided in the document at [Exhibit INQ000103634]. These policy cells were mainly chaired by lead officials from the Department's business areas who were also members of the Strategic Cell. Additional Grade 7 officials and their teams recently recruited to manage health service transformation projects were immediately redeployed to the policy cells upon their arrival in the Department. The redeployment of these staff resulted in the Department's acute health services transformation programme being paused from April 2020 to the summer of 2021. Each policy cell was responsible for monitoring and responding to the impact of the pandemic in specified service

delivery/policy areas, escalated to Health Gold by Silver. The response involved developing new policies or responses designed to mitigate or address the difficult, novel, and complex issues faced by the HSC, as the impact of the pandemic began to take hold and became pervasive across the HSC. Policy recommendations and advice prepared by the policy cells for the Minister to approve were cleared by the Strategic Cell. The clearance of policy recommendations was given either verbally at Strategic Cell meetings or via email, which often included a draft Ministerial submission, circulated amongst the Cell's membership in between meetings. The Strategic Cell worked at pace logging its decisions and actions. **INQ000130312** While I continued to provide professional advice to inform the work of the Management Board for Rebuilding HSC Services, and subsequently the integrated Covid-19 Gold Command arrangements, in the second and third waves my focus was increasingly on the leadership and coordination of the increasingly complex elements of the public health response; the role out of community Covid-19 testing; the Covid-19 and influenza vaccination programmes; the emergence of new variants and action to address; and providing professional advice and risk assessments in conjunction with the CSA on policy decisions, and providing advice to the Executive on the proposed gradual easement in NPIs and the opening up of society and international travel or the need to delay or reintroduce further NPI.

Guidance, Restrictions and Regulation: International and the Common Travel Area

43. The Department, with the agreement of the Executive, introduced the international travel regulations which placed duties on travellers to NI to comply with requirements in relation to completion of the passenger locator form (PLF). This required travellers to provide their personal details, the address they were staying, their vaccination status (from 4th October 2021), confirmation of the purchase of pre-departure and post arrival testing packages and to self-isolate/ enter in to managed quarantine, depending on the country the traveller arrived from. UK border policy and operations are UK Government reserved matters. A fixed penalty notice regime was introduced under the International Travel

regulations which enabled Border Force officials to issue fixed penalty notices to those arrivals who did not comply with the requirements in relation to the Passenger Locator Form and testing packages. PSNI officers were given powers under the regulations to issue fixed penalty notices to those contravening the regulations and were also given powers to direct a person who did not comply with the self-isolation requirements to return to the place of isolation or to remove them to the place of isolation. Health policy is a devolved matter and therefore the UK Government had to consult the Devolved Administrations, including the NI Executive, on health protection measures at the border. The Department's policy development underpinning these Regulations was therefore informed by information on the risks associated with international travel, provided from UK Government national analysis, e.g. Joint Biosecurity Centre, which took account of the reliability of epidemic surveillance data and quantitative information about numbers. The Department's policy responsibility for health protection included the maintenance of public health information and advice in relation to travel to and from NI and within the Common Travel Area. The Department was also responsible for liaison with the Home Office (Border Force) in relation to compliance by airlines and cruise operators to NI in relation to the restrictions on passengers, and the information which had to be provided to passengers. This was a complex matter, as some aspects of policy in this area were in effect cross-cutting between the UK Government and the Devolved Administrations. For example, in NI the enforcement of measures was the responsibility of the Home Office Border Force and the Police Service of Northern Ireland, with the Public Health Agency providing advice in relation to Port Health.

44. In the absence of a identified lead policy department within the Executive, with the agreement of the Permanent Secretary and the Health Minister to manage the associated complexities and interactions, I proposed and established an International Travel Directorate within CMOG. There were initially weekly meetings of the International Travel Directorate team which I chaired. This directorate coordinated the review of all relevant papers, information and data which was subsequently reviewed and considered by the CSA and myself with our advice provided to the Health Minister. The Department also considered any information available in respect of international travellers entering the Republic of

Ireland before transiting to NI, although the extent of this information varied during the pandemic.

45. While not in legislation, informed by advice from the CSA and I, NI provided guidance [see Exhibits INQ000145667 and INQ000145703] for individuals travelling within the Common Travel Area (being, the UK, Guernsey, Jersey, Isle of Man and the Republic of Ireland). This guidance requested that if travel involved an overnight stay in Northern Ireland, a rapid lateral flow device test should be taken before beginning the journey and advised that the individual should only travel if the test was negative, and the individual was not experiencing any Covid-19 like symptoms. Completing a passenger locator form was not required unless the individual had been outside the Common Travel Area in the previous 10 days. The guidance also recommended taking post arrival lateral flow device tests as well. Those who travelled to NI, having entered via the Republic of Ireland, had to complete both an Irish Passenger Locator Form and a UK Passenger Locator Form. In October 2021 the Department NI and its counterpart in the Republic of Ireland finalised a data sharing agreement [see Exhibit INQ000120715] for the Republic of Ireland Passenger Locator Forms, which was designed to mitigate the risk of a passenger entering NI, via the Republic of Ireland, and not adhering to NI's public health measures for example, self-isolation and or testing. Both departments developed a Short Messaging Service that notified travellers crossing the border of the requirement to complete both documents. This work was coordinated and developed within CMOG.

Review of the International Travel Regulations

46. The Health Protection (Coronavirus, International Travel) Regulations (Northern Ireland) 2020 No. 90 placed a duty on the Department to review the need for the requirements imposed by these regulations at least once every 21 days. The first review took place on 29 June 2020. As NI moved to a situation where local incidence and prevalence was much lower than it had been, imported cases could become a higher proportion of the overall number of infections, and the advice the CSA and I gave, was that measures taken to prevent the introduction of imported cases would have greater potential benefit. The review was brought

to the Executive for consideration using the most recent data analysis and advice in relation to trajectory of the pandemic in NI. The Executive agreed there was a need to retain the regulations. Further reviews of the regulations took place on 20 July 2020 and 10 August 2020, during which the Executive agreed that travel regulations were still required. On 20 August 2020 the review period for these regulations changed from 21 days to 28 days, which was in line with domestic restrictions regulations and the other Devolved Administrations.

47. Cross-cutting policy decisions requiring Executive approval were included in subsequent amending regulations with further minor amendments for example the addition or removal of countries from travel corridor lists made without referral but notified to the Executive. Following the fourth review, on 7 September 2020, the Executive agreed that, due to the increasingly regular basis that the regulations were being amended in relation to the addition and removal of travel corridor list countries, that any further amendments made to the Travel Regulations would also be considered a review. This change to the regulations was made on 3 October 2020. Due to the nature of the pandemic and the urgency in which the regulations had to be made, scrutiny of the regulations by the Assembly's Health Committee often took place after the regulations came into operation. Departmental officials from CMOG attended the Health Committee sessions to provide verbal evidence regarding the advice and information which informed the Executive's decisions.

48. The development of the Department's policy on the International Travel Regulations was informed by the Health Minister's and officials' participation in UK information sharing groups. CMOG colleagues from the Department's International Travel Directorate attended a range of groups. These groups included: the Border Health Measures Board (chaired by the Cabinet Office covering all aspects of international travel and the future of border controls); the UK Government/Devolved Administrations International Travel Programme Board (chaired by the Department for Transport) which discussed UK Government policy changes and new proposals being brought forward for decision at Covid-19 Operation Committee meeting. The Covid Operation Committee was set up to deliver the policy and operational response to Covid-19 and was chaired by the

Chancellor of the Duchy of Lancaster and Minister for the Cabinet Office. The Chancellor of the Exchequer, Secretary of State for Health and Social Care and other Cabinet Ministers were invited according to the agenda including Devolved Administration Ministers. The UK Government/Devolved Administrations International Travel Programme Board also discussed the position of the Devolved Administrations on alignment with UK Government policy.

49. The Health Minister attended Covid Operational Committee meetings, dealing with international travel, which included Ministers from the other Devolved Administrations before final decisions about NI Travel Regulations were made. I supported the Health Minister in these meetings. Departmental officials from CMOG attended pre-meetings, usually scheduled 24 hours beforehand, to consider the policy decisions to be discussed at the Covid Operational meeting and the issues arising. Departmental officials also attended regular meetings of the UK Government/Devolved Administrations Travel Group led by the Department for Transport. These meetings enabled the Devolved Administrations to share their views on policy proposals from the UK Government's Covid-19 Global Travel Taskforce. The exchange of views informed the Department's advice to the Health Minister of the position being taken by the other Devolved Administrations on some of the international travel measures, including the completion of the Passenger Locator Form and post-arrival Covid-19 test booking platforms. Departmental officials also attended the fortnightly meeting of the Passenger Locator Form Working Group, chaired by the Home Office, which discussed changes to the Passenger Locator Form in the light of any travel policy and regulation changes or general improvements to the form, and enforcement measures at the border.

50. Officials from the Department also attended the Department of Health and Social Care/Devolved Administrations Managed Quarantine Service/Border Health Measures checkpoint meeting. This meeting discussed any planned changes to red list country arrivals and policies, the policies on testing and the Managed Quarantine Service. The Managed Quarantine Service/Department of Health and Social Care Contractor meetings were held with varying frequency, sometimes daily. The contractor meetings provided an awareness of operational

matters such as contract handovers, stock, information on bookings, occupancy, and testing compliance in the local Managed Quarantine facilities.

Review of the Statutory Non-Pharmaceutical Interventions and guidance

51. Throughout this period the CSA and I were required to provide input to Executive papers on NPIs prepared by the Department which reflected the advice we provided. From April 2021 onwards, the Executive Office primarily led on the provision of papers and recommendations to the Executive about the easement of restrictions and these papers provided by the Executive Office were introduced at Executive meetings by the First and Deputy First Minister. Under the new pathway, these Executive papers on restrictions led by The Executive Office routinely included the advice provided to The Executive Office by the CSA and me. Our advice continued to be informed by the same sources of scientific evidence as before including advice from the Strategic Intelligence Group and the modelling prepared by the NI Modelling Group and other evidence for example on emerging new variants and the impact of vaccinations. Many of the proposed easement proposals were granular in nature so that their impact could not be individually modelled. The advice provided to The Executive Office by the CSA and I was invariably subject to discussion within the Department including, for example, with the Health Minister and the Permanent secretary as well as Department policy staff. The advice was also normally cleared through the Health Minister prior to being shared with The Executive Office officials.

52. The advice broadly reflected that those measures which increased mixing amongst the population increased the spread of Covid-19, whilst measures which restricted or lessened mixing amongst the population reduced or lessened the spread of the virus. The CSA and I considered the numbers of people who would be affected by individual easements and the extent to which mitigations, including those set out in guidance and media campaigns, could mitigate the impact of easements on transmission. We also considered evidence on the changing levels of adherence to restrictions by the population and modelling of the future possible trajectory of the epidemic which reflected the cumulative impact of multiple easements of restrictions. The impact of restrictions on the general

health and wellbeing of the population had always been a factor in assessing whether or not to recommend restrictions. While the urgency of decision making, and other competing priorities did not allow for a full assessment of the impact on more vulnerable groups the Department did attempt to mitigate some of the potential impact on those who it was anticipated would be most adversely affected. For example, departmental resource working on the Executive's Protect Life 2 Strategy on suicide and self-harm prevention which is led by the Department and I chair was protected so that this strategy could continue to be implemented within existing resources. The Steering Group and implementation groups continued to meet throughout this period. All services delivered under Protect Life 2 continued to be supported including Lifeline (a crisis support helpline), the Self Harm Intervention Programme, training, awareness raising and public information campaigns, counselling provision, Community Response Plans, and the Flourish churches suicide prevention initiative. There was also public pre-consultation undertaken relating to postvention suicide prevention services to support those following a death from suicide. Additionally, the Executive Working Group on Mental Well-being Resilience and Suicide Prevention, to which the Department provides support, met throughout the pandemic in recognition of the importance of these issues and the potential adverse consequences of the pandemic. By April 2021 restrictions had been in place for a large part of the previous twelve months and the impact on health and wellbeing of potentially continuing with restrictions weighed more heavily in the Department's considerations. The advice of the CSA and I in respect of each proposal for easement normally took account of the risks associated with each proposal and were assessed as one of the following: Agreed; Low risk; Moderate risk; High or Significant risk; or Not Recommended (At this time). These assessments were predicated on the expectation that the mitigations described in the Executive paper proposing easements, including mitigations we had identified as part of our advice against each proposal, would be implemented as part of the implementation of the proposed easement.

53. The requirement for monthly reviews of the regulations reflected the process described in the Executive's 'Pathway out of Restrictions' document. The Executive's approach to decision-making in relation to NPIs changed somewhat with the establishment of the Cross-departmental working Group and the Executive Covid-19 Taskforce, however the advice of the CSA and myself continued to inform these reviews. Executive papers from the completed reviews ensured that alongside the papers and updates received at each Executive meeting, on a monthly basis the Executive received a more detailed and comprehensive analysis of the Department's analysis and advice with detailed consideration and input from myself and the CSA. These reviews typically outlined the latest data and the Department's analysis and assessments and evidence regarding the progress and impact of Covid-19 as well as comparisons with other UK Jurisdictions and the Republic of Ireland and summarised the then current position with regulations and restrictions which were still in place informed by the advice of the CSA and me. The reviews took account of the impacts of any relaxations of restrictions, and in due course the roll out of the vaccination, expansion, and changes to the approach to testing, changes to contact tracing and isolation guidance and updates to the modelling of the trajectory of the pandemic to inform the Department's advice to the Health Minister and the Executive. The review also provided insights into the underlying factors which informed the Department's position and the advice being provided by the CSA and me to the Executive on NPIs, including but not limited to the direct impact of Covid-19 on the health and well-being of the population. This included ongoing analysis of the spread and transmission of Covid-19 and impact in nursing and residential care homes with outbreaks; the hospitalisation of Covid-19 patients and number in ICU and deaths of those with a Covid-19 diagnosis; the impact on the non-Covid related health and well-being of the population including reduced and delayed access to healthcare for non-Covid-19 conditions; and the negative impact on public health. As described at paragraph 37, in our advice to the Executive, the CSA and I advised that there was in effect three separate but related and linked epidemics occurring; the first, in the community, second a week to ten days later in hospitals, and then in care homes with increases in care home transmission and outbreaks following approximately two weeks after higher levels of community transmission. Outbreaks in care homes throughout the

epidemic in Northern Ireland remained closely related to higher levels of community transmission and infection. While the measures introduced to protect vulnerable patient in hospital and people living in care homes were of benefit, albeit resulting in significant isolation and distress for families and staff, the most effective way of reducing care home outbreaks and outbreaks in healthcare settings was to control wider community and transmission. I believe this was understood by Ministers in their consideration and review of NPIs.

54. The concerns in respect of the wider public health implications included consideration of the consequences of reduced screening, the impact on the mental health of the population and other concerns such as the impact on education, child protection and domestic violence. These concerns, while present throughout the first and second waves of the pandemic, inevitably weighed more heavily in the Departments, and in the CSA's and my consideration in the third wave in particular due to the duration of the pandemic and the long period over which NPIs were in use which meant that these factors and the associated harms were likely to have a greater culminative impact. The impacts on the health and social care workforce were also significant and presented increasing concerns. The health and social care system, that had been operating at over 100% of its capacity for some time and staff and volunteers, had faced an unparalleled level of risk to their health and wellbeing given the prolonged and intense response. During this time the Health Minister, the Department and I had increasing concerns about the capacity of the health system to respond to any Covid-19 related increase in demand including those requiring hospital or ICU care.

55. In providing our advice, the CSA and I remained mindful of the threat of emerging new variants of concern which might be more transmissible and cause more severe disease. Our advice was informed by the NI modelling group outputs on potential scenarios for the trajectory of the epidemic including the likely future path based on best case, worst case, and median case scenarios. We considered: scientific evidence and research into the epidemic and the effectiveness and sustainability of the responses including NPIs; evidence about the pressure on contact tracing; evidence on vaccination uptake; evidence on adherence to the wearing of face coverings; and changes in behaviours in

relation to compliance with restrictions. Alongside these considerations, most of which were also relevant to the consideration of the need for NPIs during the previous waves of the epidemic, the advice provided to the Executive also took account of specific features of the epidemic which developed during later in the third wave.

56. From April 2021, there was a need to consider the as-yet only partial vaccination coverage of the population. By August 2021, the CSA and I highlighted the partial vaccination coverage amongst younger age cohorts and from September we were concerned that vaccination coverage amongst younger age cohorts appeared to be lower than in other UK jurisdictions. By June 2021, the Department, CSA and I were advising caution to the Executive in respect of further easements until there was robust data on what impact the easements implemented over the previous couple of months was having on transmission. From July 2021, there were significant concerns about the specific threats posed by the Delta variant and some concern about recent relaxations relating to the Common Travel Area which were likely to increase the prevalence of the Delta variant, although recognising it was inevitable that Delta would also become the dominant in NI, which it did by August 2021. By September 2021, the Department was associating the significant increase in community transmission with recent relaxations combined with concerns that the effectiveness of vaccinations against Covid-19 may be waning and that third doses and booster doses of the vaccination would be required to protect against further transmission and disease. Subsequently, by January 2022, concerns were emerging about the new variant of concern later known as Omicron.

57. Evidence and data flows about the virus during the pandemic became increasingly well established with some new data streams also being developed, for example Waste Water Surveillance (WWS) and monitoring adding to our ability to track the pandemic, to detect increases in community transmission and the emergence of new variants and variants of concerns. The later data flow added to the monitoring of variants already available through the genome sequencing of positive PCR tests. During this time, there was a steady flow of new research evidence generated within the UK, Europe, the USA and from

around the world. The Department, the CSA and I had full access to, and participated in consideration of this research evidence and data presented at SAGE, NERVTAG, SIG and in other fora with data and evidence being shared amongst departments, for example through the Cross Departmental Working Group; with Executive Ministers at Executive meetings, and through briefings; with the Health Committee through briefings; with the Assembly through Ministerial Statements; and with the media, business, churches, voluntary sector and general public through press releases, media appearances, and engagement work which was often coordinated by TEO. All this evidence and data required significant ongoing consideration and review by the CSA (in particular) and myself, to ensure the provision of the most up to date advice to Minsters. We endeavoured to ensure in our public communications and statements to convey a full understanding of all new relevant data and evidence.

58. Throughout the pandemic Executive Ministers were faced with very difficult choices as they considered range of non-health related factors alongside the advice and input from the Department, the CSA and myself. This was particularly the case in the second and third wave of the pandemic as they took account of information and advice provided by a number of departments concerning the wider societal and economic impact when arriving at decisions to increase or relax NPIs. To ensure a full understanding of the scientific and public health basis of Executive decisions, the Executive Office, the Department through its updates to the publicly facing Department of Health Evidence Bank and the Public Health Agency were routinely publishing data and research evidence so that information was widely accessible to the public, media and any others who wished to consider. As the pandemic progressed, modelling of the trajectory of the epidemic was well established and increasingly robust, based on longer time series of data, more datasets being available to inform the modelling, and the knowledge and experience already gained during the epidemic. Structures for the consideration of evidence in Northern Ireland such as SIG were also well established although, by August 2021, it was felt appropriate to reduce the frequency of SIG meetings from once every two weeks to once a month.

Understanding the virus and its transmission

59. At the start of the pandemic in January and February 2020, the initial understanding of SARS-CoV-2, as the causative virus, was very limited. The initial assessment of risk and transmission was therefore largely based upon what was known about similar coronaviruses. Fortunately, there was early identification of the causative virus, and this allowed the rapid development of molecular tests although testing capacity was limited in the early stages of the pandemic, as discussed below. This is best covered and summarised comprehensively in the CMOs' Technical report on the Covid-19 pandemic in the UK, Chapter 1, and the associated papers and studies referenced [see Exhibit **INQ000203933**] to which I contributed, and I am a co-author. While it is not written for a public audience and therefore is quite technical in nature, I have therefore drawn on and referenced this report in this statement as an authoritative source document which sets out the experience, knowledge and learning reflections of myself and CMO colleagues and which we hope will be of assistance to our successors in any future pandemic. This report reflects the experience in NI, and I am extremely grateful to all of those who contributed. I have highlighted some of the salient points only, and the high-level timelines in the developing understanding of the virus, its transmission, infectiveness, severity of disease and contributory factors including mortality. Given that this understanding continued to evolve incrementally, and iteratively as new evidence emerged and was disseminated, it is not possible to provide definitive or specific dates when these changes in understanding occurred.

60. There was continuous learning throughout the Covid-19 pandemic as a consequence of increased scientific understanding of the virus and the sharing of that information internationally. This resulted in the rapid dissemination of knowledge on the virus: its transmission, disease severity and identification of populations and people at increased risk of severe disease; the development and persistence of immunity; and increased availability of testing and use of different types of tests such as Lateral Flow Devices (LFDs) in the community. This continuous learning also led to improvements in pandemic modelling; improved understanding of individual and population behaviours and how they were

influenced by modelling; development of vaccination; the impact of non-pharmaceutical interventions including contact tracing and isolation) and the development of new therapeutic treatments. In all of this it is important to remember that limited data, the associated uncertainty, and evolving knowledge will be a feature in any future pandemic. The increased understanding and knowledge of the virus emerged only incrementally and was considered by SAGE, NERVTAG, shared at UK CMO and Senior Clinicians meetings and the Department's Strategic Intelligence (SIG) as appropriate, and in the consideration of associated literature. NI participated in the development of the Covid-19 Genomics UK consortium (COG-UK), the outputs of which informed understanding of variant spread and significance including transmissibility. This Consortium was established in April 2020 as group of public health and academic institutions to collect, sequence and analysis genomes of SARS-CoV-2. Most of the relevant advances in knowledge and understanding of the virus and its transmission came from outside Northern Ireland. However, researchers in Northern Ireland were active throughout the pandemic, publishing several hundred relevant papers which contributed to the global knowledge base. This work continues, with ongoing publications on the long-term consequences of the pandemic. As occurred during the Covid-19 pandemic, a global effort will be required to share emerging understanding and data on the pathogen[2] (an organism which causes disease) concerned, and to establish studies that will be vital.

61. When the genetical makeup of the virus (genome) was compared with genome sequences of other known human pathogens it was recognised that SARS-CoV-1 which caused the SARS outbreak in 2003 was the closest related human coronavirus with around 80% of the genome similarly to that of SARS-CoV-2. SARS-CoV-1 was also known to cause severe human infections and also used the same ACE2 receptor (angiotensin-converting enzyme 2 receptor) to act as a receptor to bind on to human cells and to gain entry causing disease. Other related human viruses were also considered to help provide scientific insight. These included: MERS-CoV, which showed around 50% similarity in its genome but did not use ACE2; NL63, an endemic (common and established) coronavirus

[2] Being an organism which causes disease.

that used ACE2; other endemic coronaviruses: OC43, 229E, and HKU1 influenza, as a pandemic respiratory virus.

62. Only later, as data about SARS-CoV-2 developed over time did it became apparent that SARS-CoV-2 was different from SARS-CoV-1 in several important ways including pre-symptomatic infectiousness, higher levels of asymptomatic or subclinical infections and routes of transmission. In the early stages of the pandemic, before robust data on SARS-CoV-2 became available, it was the knowledge and experience of these related pathogens that informed and guided early understanding of the virus and public health actions and response to the pandemic. This included for example, the prioritisation of potential treatments that had already shown potential benefit against human and zoonotic (transmitted from animal to human) coronaviruses in either laboratory tests or in clinical use, and the recognition of the potential for reinfections due to the previous observation of waning immunity in the case of seasonal coronaviruses. This knowledge also informed early estimates of the incubation period, which was known to be longer for coronaviruses than influenza. In addition, existing data on the environmental persistence of coronaviruses informed early policy on decontamination.

Transmission and higher risk environments and occupations

63. As in previous pandemics and recent epidemics, and in the early stages of the Covid-19 pandemic where NPIs were the only interventions available, evidence on routes of transmission was important to inform the response. It was established early in the pandemic that the likely principal route of transmission was respiratory, although other secondary routes including faeco-oral could not be excluded. Three main routes of transmission had been considered as potentially important for Covid-19: fomite (contaminated surfaces and objects), droplet, and aerosol spread. The scientific consensus, and the relative importance of these different transmission routes, and the potential role of other routes was continually reviewed, and also as new variants of SARS-CoV-2 became established. Close contacts of infected individuals were rapidly identified as being at an increased risk, indicating that close range droplet transmission

was likely to be important. It was important, however, to balance the level of infection risk from a particular route of transmission with the likelihood and frequency of exposure to this route in daily activities.

64. As indicated in paragraphs 59 and 61 - 62 above, studies of transmission routes for other respiratory viruses and similarities with known viruses within the same family of coronaviruses provided scientific insight. While the airborne transmission capabilities of SARS-CoV-2 were similar to SARS-CoV-1, it was subsequently identified that there were a number of important differences, such as in timelines of transmission, and the much greater role of asymptomatic transmission seen with SARS-CoV-2 when compared to SARS-CoV-1. As a respiratory virus, SARS-CoV-2 had the potential for transmission via droplets and aerosols, direct physical contact, and indirect physical contact with contaminated surfaces or fomites. Evidence suggested that close contact with a person with acute respiratory infection carried more risk than a contact at greater physical distance, implying the importance of close-range droplet and, as is now understood, short-range aerosol transmission. Previous research into other acute respiratory infections had also shown the importance of transmission in public spaces including public transport, indoor public places such as shops, restaurants, parties, theatres and places of worship and also suggested a potential role for more distant primarily aerosol transmission. Previous systematic reviews had also shown that regular handwashing reduced the incidence of respiratory infections, implicating a possible role for direct contact and or fomite-based transmission. While this all helped guide early responses strategies to limit transmission, the relative importance of these transmission routes for SARS-CoV-2 was initially unclear and required further investigation.

65. Early retrospective cohort studies were helpful in generating evidence. In January 2020, a retrospective cohort study of 41 patients in Wuhan, China provided the initial evidence of human transmission. This study suggested further investigation to exclude major alternate routes of transmission such as faeco-oral and recommended the use of precautions against airborne transmission [see footnote 178 of Exhibit **INQ000203933**. Similarly, at the start of the pandemic, outbreaks provided opportunities to understand transmission,

especially when the background level of community prevalence was low. Early outbreaks in restaurants in China showed that the highest risk of infection was for those closest to the infected person also known as the "index case" in any outbreak. They also demonstrated infections among people at distant tables, implying that some aerosol transmission had occurred. Similar findings were seen for outbreaks on coaches and trains. An early outbreak investigation in Germany in March 2020, combined with similar studies from China, suggested the importance of pre-symptomatic transmission as some of those infected had only been exposed to the index case prior to that person becoming symptomatic [footnotes 185, 186, and 187 of Exhibit INQ000177534]. In addition to these investigations, it was recognised early in the pandemic that there was a need to establish surveillance programmes across a range of settings to provide real-time information on transmission by different routes such as in households, in the community, and in health and social care settings. However, this relied on large scale availability of testing, which was limited in early spring 2020 in the UK as testing capacity was at that time unable to meet the rapidly rising demand [Chapter 6 of Exhibit INQ000177534].

66. In April 2020 to maintain an up-to-date overview of emerging evidence the SAGE Environment and Modelling group (EMG) was established. This group continuously monitored best available scientific evidence on transmission routes and the growing evidence for the significant role of aerosol transmission. In July 2020, based on a further review of the existing evidence, the WHO recommended that direct or close contact with infected people via droplet remained the most likely principal route of transmission, and that uncertainty remained about transmission by fomites. While multiple environmental sampling studies demonstrated presence of viable SARS-CoV-2 virus and RNA on surfaces for hours to days there were no reports or outbreaks demonstrating fomite transmission and most people who came into contact with infectious surfaces had also had close contact with an infectious person. As the pandemic progressed, the importance of airborne transmission was increasingly recognised. It was established early on that transmission was far more likely indoors than outdoors, suggesting a role for the environment and dilution of the virus by fresh air influencing transmission. Although the fact that the respiratory

route was dominant was established very early, confirming the relative contributions of close range and longer distance airborne spread and of fomites presented significant challenges.

Higher risk settings for transmission

67. In the absence of specific evidence on transmission of SARS-CoV-2, established knowledge of transmission and existing research on respiratory transmitted pathogens helped to identify potential high-risk settings. Existing research on respiratory pathogens suggested that high transmission risks included households, schools, hospitals, homeless hostels, prisons and nursing homes and places where people from multiple households could meet such as hospitality settings, especially if they were physically close and particularly indoors.

68. In the first few months of the pandemic early mortality data, alongside outbreak studies, indicated that enclosed settings for vulnerable individuals such as homeless people, migrants and prisoners, cruise ships, health and care setting such as hospitals, care homes, care settings for those with learning disabilities, domiciliary care settings and inpatient mental health facilities were higher risk environments. Later in spring 2020, evidence from early outbreaks in choir groups, restaurants and fitness classes was reported. The majority of transmission did not, however, take place within recognised large outbreaks which are more likely to be identified in relatively closed settings than in more open venues such as shops or public transport where tracing of contacts is more difficult and the extent of contact often less clear. In addition, studies of outbreaks highlighting risks in particular settings had to be balanced with the overall epidemiological importance of that setting in a given population. For example, while shopping may not be in of itself high risk, the fact that the majority of people need to shop makes it an important contribution to transmission. In the early days testing was very limited, so outbreaks where multiple people were symptomatic or died would have been more likely to be reported. Differences in mortality by occupation also gave indications of potential higher risk contexts. Data from May 2020 showed that mortality was elevated in occupations with high

levels of close contact with others including health and care contact, and in those with low pay [footnote 224 of Exhibit INQ000203933]. Later analyses controlling for key comorbidities with Covid-19 showed that high levels of comorbidities in some occupational groups contributed to these variations, but setting and type of work remained an important factor [footnote 225 of Exhibit INQ000203933].

69. Research reviews and analyses that brought together multiple study types were helpful in highlighting consistent signals from particular settings. For example, an analysis of Covid-19 outbreaks in hospitality, retail and leisure facilities in the UK and elsewhere, presented to SAGE in January 2021, used multiple analytical approaches to examine transmission risks in these settings including: social contacts over time; case-control studies; secondary attack rates; cluster concordance [footnote 230 of Exhibit INQ000203933]. This analysis reinforced the initial fundamental principles that transmission risks were highest in poorly ventilated and crowded settings, where mixing of people was for an extended periods of time and where population turnover was high. Further analysis of cases by occupation and sector highlighted that risk is not necessarily the same across a particular sector or setting, with a range of socio-economic factors also influencing risks. For example, food processing is a sector that was associated with a number of large outbreaks as was the case in NI and ROI. Further analysis suggested that the risk of transmission depended not only on the characteristics of the settings such as ventilation and social distancing, but also the socio-economic characteristics of the workforce, including shared housing, pressure to continue working even if unwell due to lack of sick pay, and use of shared transport.

Asymptomatic infection and transmission

70. From the outset, asymptomatic infection and transmission were considered possible, but the extent of that was not understood. Existing knowledge of related human coronaviruses suggested that asymptomatic infection and transmissions were possible. Work was however needed to clarify the proportion of infections that were asymptomatic, and the role of asymptomatic transmission. It should be noted that asymptomatic infection does not necessarily lead to

asymptomatic transmission though it is a prerequisite, this was not always well understood in some public reporting.

71. Knowing the proportion of infections that were asymptomatic was important for case detection strategies and determining the infection fatality rate. Understanding the role of asymptomatic transmission was important for identifying which public health measures were necessary to bring R below 1. Transmission of infection from asymptomatic cases can be difficult to control. The infectious timeline is also difficult to establish in the absence of symptoms as a marker of infection or infectiousness adding complexity to disease control. Asymptomatic cases cannot be detected in the absence of testing, and as indicated, this was a constraint globally and in the UK in the initial phase of the pandemic this delayed the estimation of asymptomatic cases.

72. Early case and cluster reports raised the possibility of asymptomatic infection and transmission but often with poor differentiation between asymptomatic[3] and pre-symptomatic transmission[4]. At this stage, robust data on asymptomatic infections and whether they may be infectious to others was not available and estimates of the proportion of asymptomatic individuals varied widely. After a few months, studies of outbreaks in closed environments and facilities provided early estimates of the proportion of PCR-confirmed asymptomatic cases. However, many of these studies may have included some pre-symptomatic cases. Over time, evidence of positive tests in asymptomatic individuals increased with more reliable data on asymptomatic transmission. With respect to timelines and changes in understanding of the transmission of the virus by mid-2020, estimates of the asymptomatic proportion in closed and or institutional facilities and settings had been published and the first evidence that infectious virus could be recovered from asymptomatic individuals emerged. [see footnotes 244, 245, 246, 251, 252, and 253 of Exhibit **INQ000203933**.

73. Early review studies of the number of people with asymptomatic infection followed, with initially wide variation in the estimates of asymptomatic infection.

[3] the index case never develops sign or symptoms of infection
[4] the index case has no symptoms during the exposure period of their contacts but later develops symptoms

Studies that were able to differentiate between pre-symptomatic and asymptomatic cases provided lower estimates [footnotes 238 and 242 of Exhibit INQ000203933]. It was however not until large random sample swabbing studies, such as Real-time Assessment of Community Transmission (REACT) and those led by the ONS, established robust regular estimates of the proportion of people with asymptomatic infection. By mid to late 2020, studies of household transmission were in place and were able to identify asymptomatic infections and transmission and the viral load dynamics (how much virus was being carried and shed) in asymptomatic individuals had been characterised [footnotes 243, 254, and 257 of Exhibit INQ000203933]. The fact that asymptomatic transmission occurred was confirmed well in advance of establishing what proportion of transmission was from asymptomatic people and whether, if all symptomatic transmission ceased due to case isolation, asymptomatic transmission alone was capable of sustaining the reproduction number (R) above 1.

74. Understanding the duration of infectiousness is essential to infection prevention and control and will remain so in any future pandemic. Infections vary widely in the duration of infectiousness. It was important to understand the duration of the infectious period of SARS-CoV-2 to make informed decisions on the duration of isolation and contact tracing windows, to prevent transmission in health and care settings, and to be able to understand and model the dynamics of the pandemic. For SARS-CoV-2, epidemiological and virological methods were primarily used to develop this understanding.

The Emergence of Variants of SARs-CoV-2

75. RNA viruses such as SARS-CoV- 2, have a high likelihood of mutating and changing their genetic material when compared to DNA viruses. Throughout the pandemic new variants of the virus emerged over time, some of which created additional challenges as they were more transmissible, with a varying ability to escape previously acquired immunity or to cause more severe disease. A number of these variants such as the Alpha and Delta variants in late 2020 and Omicron from November 2021, contributed to increased community transmission and outbreaks and health and social care surge pressures.

76. The overall approach in NI, and across the UK, ROI, and internationally, was to monitor for the emergence of new variants, and variants of concern when classified as such and to seek to limit their introduction, for example through the international travel restrictions, while rapidly assessing their potential significance clinically and from a public health perspective. Once identified and detected in NI, the overall approach was also to contain the initial spread through local surge testing with the deployment of mobile testing units and enhanced contact tracing where appropriate. This ensured testing of the greatest number of people who had possibly been exposed and offered the best chance of curbing onward spread.

77. Regular updates were provided by the UKHSA, and discussed at UK wide scientific meetings in which NI participated and discussions at SIG. Verbal and written updates were provided to the Executive on the emergence of these new variants and potential significance in terms of community transmission, outbreaks, and hospital pressures. This analysis of any potential impact was contained in the weekly R paper and also informed the advice that the CSA and I provided to the Health Minister and the Executive on NPIs and other public health measures.

78. The SARS-CoV-2 pandemic marked a step change, with the UK and other countries investing in sequencing large numbers of virus genomes. This is covered more comprehensively in the UK CMO Technical Report, Chapter 1 [see Exhibit INQ000177534] and I will not replicate in this statement the discussion in the Technical Report. This genomic sequencing allowed for epidemiological tracking and also provided for the rapid detection of new variants as they emerged in the UK around the world. There was some variation in the extent of genomic sequences in some other countries as compared to the UK with many countries having limited sequencing capacity.

79. Genomic sequencing however on its own was not sufficient to understand the emergence of new variants or to undertake risk assessments to inform policy responses. The sequencing was combined with other analyses, including how

the virus was behaving in the population, to what extent it was out competing other established variants, or escaping previous immunity and the clinical severity of the associated infection. Such analysis required detailed larger scale epidemiological sampling and analysis of clinical data sources. This data was not, and could not be, immediately available and took time to assemble and assess.

80. Wastewater sampling (WWS) began as an all-Ireland pilot in December 2020 across two sites. A full NI surveillance programme was initiated by DAERA commencing April 2021 (32 wastewater treatment sites, 4 samples per week), with the Department leading the programme from September 2021. With a reduced budget, from August 2022, NI's WWS continued with sampling taken twice weekly across 24 treatment sites. WWS helped give early warning of the circulation of SARS-CoV-2 variants of concern and allowed the tracking of new lineages and variants of SARS-CoV-2. This sampling, combined with whole genome sequencing of clinical isolates from those testing positive, was used in Northern Ireland to inform targeted public health responses by the PHA, assisting in the attempted containment of initial transmission of more transmissible variants or those associated with increased disease severity.

81. Northern Ireland participated in the development of the Covid-19 Genomics UK consortium (COG-UK), the outputs of which informed understanding of variant spread and significance. This Consortium was established in April 2020 as a group of public health and academic institutions to collect, sequence and analyse genomes of SARS-CoV-2. COG-UK delivered large-scale and rapid whole-genome virus sequencing to local NHS centres and the UK government. The data derived from COG-UK was used to help Public Health Agencies to manage the Covid-19 outbreak in the UK and inform vaccine research efforts.

Alpha

82. Throughout the summer of 2020 there was no significant evolution of SARS-CoV-2 within the UK. Towards late 2020, however, rising case rates (initially in the south-east of the UK) were investigated and subsequently found to correlate with a negative result for the S gene target, one of the commonly used probe sets for quantitative polymerase chain reaction (qPCR) tests. This variant was later labelled the 'Alpha' variant and its spread was relatively easy and fast to track using S gene target failure in PCR testing for Covid-19 infection. This underscored the importance of using several different PCR targets in combination for large scale testing of an RNA virus. Had this not been done, Alpha infections would have gone undetected until later in the wave.

83. The Alpha variant drove a large wave of cases in the winter of 2020 to 2021, and genome sequencing revealed many mutations throughout its genome. The Alpha variant was subsequently confirmed to have increased transmissibility as a result of changes in receptor binding and also changes in immune control. With the emergence of Alpha (and Beta which was detected in Southern Africa), efforts were increased to further expand sequencing and rapidly identify and characterise any other new variants arising across the UK, including in NI. Information on the emergence of new variants was discussed at UK CMO meetings, SAGE and in weekly meetings with the ROI.

Delta and Kappa

84. Unfortunately, by early 2021, there were emerging observations in India of potential new variants, with a significant surge in cases reported and increased hospitalisations. These variants were later classified as Delta and Kappa. In the UK, cases of Delta and Kappa were initially detected predominantly in those travelling from India (see, UK CMO Technical Report Chapter 8 [see Exhibit INQ000177534] on NPIs, for further epidemiological context on travel restrictions). Initially, Kappa was thought to pose the larger threat, as imports into the UK consisted mostly of that variant, which contained a mutation at spike position 484 (484Q) that was flagged as a likely antigenic escape mutant due to its similarity to E484K (found in Beta and Gamma). However, Delta began to

exhibit a much more rapid growth rate and went on to become dominate globally in 2021.

85. This rapid growth rate occurred at the same time as the UK was rapidly vaccinating its population and gradually lifting NPIs. Laboratory studies and epidemiology showed that Delta was more transmissible than previous variants. It also showed some modest immune escape properties, potentially allowing it to break through the protection and immunity as a consequence of vaccination or prior infection from wild type SARS-CoV-2 with greater efficiency than Alpha. The Executive, informed by the advice from the Department, adopted a precautionary approach advising travellers from elsewhere in the U.K. not to travel if symptomatic and to test prior to departure if staying overnight. While NI delayed Delta becoming dominant as compared to elsewhere in the U.K, probably as a consequence of geographical location and advice on travel within the CTA, it did eventually become dominant.

Omicron

86. By November 2021 many countries worldwide, including the UK, were reaching their highest rates of sequencing. Sequencing in Southern Africa and travel-related sequencing in Hong Kong identified a new variant of concern. This identified Omicron as soon as the first 4 sequences had been uploaded by Southern African researchers to the online sequence database GISAID.

87. Omicron was characterised by a very large number of mutations, including 35 across the spike gene. The large antigenic distance or differences between Omicron and the wild type spike protein, combined with waning immunity in the population, resulted in poor neutralization as illustrated by the reduced ability of antibodies to block Omicron virus entry into the cells of those previously vaccinated. This necessitated the rapid implementation of vaccine booster programmes to counter immunological waning associated with the establishment of this variant.

88. Whole genome sequencing significantly advanced during the pandemic and the UK was world-leading in terms of genomic epidemiology, identification of novel variants and understanding the evolution of the virus in real time. This allowed both population-wide surveillance and epidemiological tracking, to understand the introduction of virus and variants into the UK, and rapid detection of novel imported variants. It also allowed targeted epidemiological surveillance for example in outbreaks in hospital populations. Large scale sequencing on its own was not sufficient to understand variant emergence, nor to make meaningful risk assessments to inform policy responses, until coupled with phenotypic analyses including antigenic studies and epidemiologic analyses of clinical severity. It also required robust, large scale epidemiological sampling. It was therefore important to bring together multidisciplinary groups of public health academics including epidemiologists, genomics scientists, bioinformaticians and virologists to rapidly assess new variants.

89. During the pandemic, following some potentially misleading media commentary on the extent of whole genome sequencing being performed in Northern Ireland [Exhibit INQ000276524], the Department issued a statement on 24 January 2021 [Exhibit INQ000276525] to detail the ongoing work in NI to identify new variants of the SARS-CoV-2 virus. Communication with the public, transparency and addressing misunderstandings were important aspects of the pandemic response.

Disease Severity and Mortality

90. One of the key early questions for understanding the mortality risk of a disease is to understand if someone is infected with a disease how likely it is that they will die. The answer to that question is captured by the infection fatality rate (IFR) which is the number of deaths from a disease divided by the total number of cases. The case fatality rate (CFR) is the ratio between confirmed deaths and confirmed cases. The CFR can be a poor measure of the mortality risk of the disease as many cases may not be confirmed. In the very early stages of this pandemic, as was the case for H1N1 influenza pandemic in 2009 and the SARS-CoV-1 outbreak in 2003, it was difficult to ascertain mortality rates. This

was also the case in 2003 with SARS-CoV-1 were initial case fatality rate (CFR) figures underestimated severity as early estimates missed delayed deaths. Statistical methods developed at that time to provide a more robust estimate of severity in similar situations were useful in this pandemic. In the H1N1 influenza pandemic in 2009, initial CFR estimates were about 500 times higher than the later recognised infection fatality rate (IFR) of 0.001% to 0.002%. This occurred because of initially measuring only symptomatic or confirmed cases and missing milder and asymptomatic ones. Later, more accurate estimations of the IFR for H1N1 influenza arose from studies on outbreaks within specific settings such as schools.

91. In the early stages of the pandemic there were varying estimates of CFRs for SARS-CoV-2 before widespread surveillance was set up. Initial estimates of the CFR came from dividing numbers of reported deaths by the estimated number of cases in Wuhan, China at a given time. These estimates were improved by Chinese Centres for Disease Control (CCDC) data. In the middle of February 2020, the CCDC weekly bulletin provided a CFR estimate of 2.3% from 72,314 cases identified using either PCR testing (63%) or clinical diagnosis. Of this group 1.3% were thought asymptomatic. Of the PCR confirmed cases, 81% were classified as mild (which included non-pneumonia or mild pneumonia) and 19% were described as severe. The CFR for those with severe disease was high at 49% and increased substantially with age. Another early study which included a wider range of cases from PCR testing for international travellers arriving to China, along with cases and deaths in Wuhan reported a CFR of 1.4% for symptomatic Covid-19. It was initially difficult to interpret the applicability of such studies for a UK context partly because denominators and numerators varied and also because the populations differed from the UK in several important ways including age distribution.

92. Population-wide surveillance including people testing positive and surveillance of those with symptoms when linked to outcomes such as hospitalisation and deaths provided high quality data for the routine calculation of CFRs by providing a robust denominator. Initially in the UK this was done using serology (antibody testing), which was difficult to interpret due to waning antibody levels, and after

late spring 2020 by large scale surveillance studies such as the Office for National Statistics (ONS) Covid-19 Infection Survey (CIS), Real-time Assessment of Community Transmission (REACT) and Early Assessment of Vaccine and anti-viral Effectiveness 2 (EAVE-2), and in cohorts such as SIREN in healthcare workers and Vivaldi in care homes. The calculation of an accurate IFR required serological testing of a representative random sample of the population and establishing a regular serological survey allowing an estimate of the severity of disease on a regular basis. This took time to establish and for results to indicate severity more clearly and CFR was available much more quickly. The early establishment of data storage, data sharing and linkage was important for the calculation of these statistics through rapid analysis. Like previous experience with H1N1 in 2009 the investigations of large outbreaks of Covid-19, also supported CFR and IFR estimates early on, as well as providing signals on the proportion of asymptomatic infections. An outbreak on the cruise ship Diamond Princess in February 2020 provided early data on outcomes for 3,711 passengers and crew and gave a CFR of 2.6% and an IFR of 1.3%, likely due to testing across the ship picking up asymptomatic cases. Studies of Wuhan residents outlining the likely delay between onset and death were critical in estimating both CFRs and as testing and surveillance expanded in due course IFRs. It was not until late spring 2020, when many countries were experiencing high transmission and testing capacity was being significantly increased and with larger scale surveillance studies, that a shift from CFR to IFR occurred. Estimates at that time indicated an overall IFR of around 1%.

93. The presence of asymptomatic cases and asymptomatic transmission for Covid-19 was particularly problematic in early mortality rate estimates, and this had not been the case for the closely related SARS-CoV-1 in which peak infectiousness matched the time of peak clinical symptoms. Many early studies missed asymptomatic cases in the absence of widespread testing and community surveillance. This was also the case in the UK in February to April 2020 when many cases of Covid-19 occurred in the community without being confirmed by testing which likely contributing to higher early CFR estimates.

94. Mortality estimates varied significantly from country to country most probably due to different age demographics in the population and differences of other risk factors such as obesity, levels of social deprivation and importantly comorbidities. Comparison was also more difficult as hospitalisation criteria, testing availability and case definitions varied over time and across the different health systems in different countries. For example, a study in Italy, where 37.6% of cases were aged 70 years or older, estimated a CFR of 7.3% up to 15 March 2020, compared to a much lower CFR in a Chinese study where just 11.9% of cases were over 70. Understanding of how these complex and interacting factors influenced severe disease evolved throughout the pandemic and highlighted the importance of continual evaluation of variation in severity.

95. Obesity was also recognised early in the pandemic as an important risks factor for increased mortality. A study of over 13,000 hospital admissions in England found a J-shaped relationship between Body Mass Index (BMI) and death from Covid-19 with a BMI of 40 associated with about a 2-fold increased risk of death. Geographic location, degree of social deprivation and the presence of co-morbidities, which in some cases were linked to ethnicity, also played an important part in understanding rates of severe Covid-19 and disease outcomes overall, reference page 34-38, Chapter 1, UK CMO Technical Report [see Exhibit **INQ000203933**]. In the working-age population, Covid-19 death rates were markedly and consistently higher for men than for women throughout the pandemic highlighting the importance of gender as a risk factor for mortality.

96. Given all these differences, changes in all-cause mortality across different countries was a more helpful indicator as it was not sensitive to differences in diagnostic or testing data and included both direct and indirect mortality impacts from the pandemic. That said, geographical comparisons even with all-cause mortality needed to be handled very carefully as direct comparisons are not always valid.

97. Other measure of disease severity including Covid-19 admissions to hospital and ICU were particularly important to plan healthcare delivery. Understanding delays between infection and severe disease was also vital in estimating the correct denominator and rates of severe disease at any given point. The mean delay from infection to death for Covid-19 was around 4 weeks with wide variation. Many of the early patients in the UK with Covid-19 were travellers returning from Europe, the majority of whom were young and otherwise healthy individuals with mild disease and were not representative of the wider population. Within a matter of weeks however, the disease had spread more widely, and hospitals were faced with large numbers of older patients with severe disease and high mortality.

98. As case rates rose, determining wider population levels of morbidity was complex. Although routine statistics on the number of people requiring hospital care within the UK was available, the need to prioritise tests given the initial limited testing capacity meant that it was difficult to estimate the proportion of cases likely to require hospital admission to an Intensive Care Unit (ICU). As indicated in paragraphs 92 - 97, comparisons using other countries hospitalisation rates as with CFRs and IFRs, was complicated by differing age structures in the population, different criteria for hospitalisation criteria and difference in access to healthcare. A further complication in such comparisons was that in some countries all cases were hospitalised to isolate those who were infected while other countries only admitted those who required hospital care on clinical grounds. An early report from Hubei province, China, found that 80% of identified cases were mild indicating that hospitalisation was unlikely to be required for the majority of cases, although its estimation of cases requiring hospitalisation was undoubtedly too high, most probably because it was limited to symptomatic patients. Widespread testing subsequently enabled more accurate estimates which gave significantly lower percentages for example a study in Indiana, USA, in early 2020 found an infection hospitalisation rate (IHR) of 2.3%, while a similar analysis in the UK at the end of 2020 (for the wild type strain) gave 3.5%.

CEV Clinically Extremely Vulnerable and Shielding

99. Initial reports from China in January 2020 indicated more severe disease and poorer outcomes amongst older men and that increasing age has remained the strongest risk factor for hospital admission and mortality. Over the next few months additional data emerged from China, and later Italy, suggesting that people with certain underlying conditions were at increased risk of death and disease. As cases began to appear in the UK the First Few Hundred (FF100) surveillance protocol provided basic information about the clinical presentation of the first cases and a description of the people most affected. This provided early indications of populations at greater risk.

100. There were discussions ongoing throughout March 2020 and across the UK on identifying those at most risk. I and my DCMOs were fully engaged in UK CMOs and UK expert panel review of emerging evidence, the policy approach and discussions to identify those most at risk. As described at paragraph 103 the Department's approach was subsequently informed by our membership of the UK National CEV Group and consideration of SAGE guidance. This work also considered approaches to protect the most vulnerable including the ongoing review of the appropriateness and proportionality of these measures given the significant impact in terms of loneliness, isolation, and mental health. Later hospital admission data confirmed the increased risk of hospital admissions for older adults and in particular older men including those with certain underlying conditions and this was also reflected in Intensive Care admissions. Further details of this are considered in Chapter 2 of the UK CMO Technical report [see Exhibit **INQ000203933**] including the measures taken in mitigation.

101. These discussions culminated in the CMO for England circulating a short briefing note on shielding for the Prime Minister on 15th March 2020. The paper, which reflected the discussions which had been taking place between the UK CMOs, had been circulated to myself and the CMOs for Scotland and Wales earlier that day for any comments [Exhibits INQ000346717 and INQ000346718]. I am also aware that there were also direct communications between TEO, the other devolved administrations and the cabinet office on the policy intent of having a

UK wide approach to the shielding policy [Exhibit INQ000346719]. Furthermore, in concert with other UK nations, I advised the Health Minister on the recommendations in relation to "shielding and the CEV cohort". The Department's approach was informed by our full participation, membership and representation on the UK National CEV Group and consideration of relevant SAGE guidance and associated evidence. This reflects the extent of my professional involvement in informing and contributing to the UK wide common approach to shielding and I believe also reflects the extent of the Departments active participation. In the early months of the pandemic much of the focus was on shielding" and protecting those most vulnerable and at risk of severe disease. I advised and updated the RoI of the proposed approach in the UK at the North South Ministerial Council meeting in mid-March which I believe may have informed their subsequent policy approach.

102. The establishment of the shielding arrangements in Northern Ireland was primarily led, within the Department, by a combination of staff from the Primary Care Directorate and Advisers from within the Chief Medical Officer's group. In general terms the Advisers led on definitional issues and professional advice which included clinical interpretation and public health implications of the policy whilst the Primary Care Directorate team led on the policy itself and operational issues such as the actual issuing of advice letters (in partnership with the HSCB and HSC Trusts) and the establishment of supports for the CEV population in partnership with other stakeholders such as the Department for Communities. As with many other aspects of the response to the pandemic the two teams worked closely with each other in effect as a single team to deliver on the shielding initiative.

103. The designation of the Clinically Extremely Vulnerable categories of medical conditions was informed by the information and advice provided via the Department's participation in the UK National Clinically Extremely Vulnerable Group. Public Health England and SAGE guidance in relation to concerns about the risk of high mortality among the clinically extremely vulnerable because of Covid-19 infection also informed the development of this policy. At the time when the definition of Clinically Extremely Vulnerable and Clinically Vulnerable were

developed in March 2020 there were only a handful of cases in Northern Ireland and still only a relatively small number of cases in the UK as a whole, with limited research evidence from within the UK. The definition and advice in relation to CEV and CV was therefore developed on the basis of evidence emerging from China and parts of Europe (mainly Italy in the early stages) which were at a much more advanced stage in the spread of Covid. The most significant risk factor for disease severity and mortality was increasing age which was identified early on in the pandemic. However, it soon also became apparent to clinicians and epidemiologists that immunosuppression and a range of underlying conditions such as cancer, diabetes and cardiovascular disease also increased the risk of disease severity leading to the development of the initial list of conditions deemed to put a person in the CEV category. The definition of CEV initially used by all four jurisdictions in March 2020 was agreed by the four UK CMOs and the definition of 'clinically vulnerable', was also agreed at a UK-wide level, as agreed by UK CMOs as detailed at paragraph 109 below. However, it remained the case that each of the jurisdictions could diverge if it so wished and ultimately the decision on the definition to be used for CEV in Northern Ireland fell to myself as CMO having considered the UK National CEV Group advice SAGE guidance. Under the UK wide criteria, General Practitioners also had a degree of flexibility to include patients they judged to be at high risk. There were subsequent changes to the definition of CEV in NI, all but one of which were agreed Nationally by the four UK CMOs. From 2 April 2020, NI included Motor Neurone Disease patients in the definition of CEV while the rest of the UK did not. This is covered in more detail at paragraphs 115 and 116.

104. The policy of focusing on CEV established in March 2020 ensured that throughout the pandemic there was a focus on protecting those most vulnerable in society. The policy was predicated on identifying those who were 'clinically vulnerable' (CV) such as older people, those with specific underlying medical conditions and those of all ages in very specific and targeted groups or categories who were at extremely high risk in the community and were thus recognised and designated as clinically extremely vulnerable (CEV). Specific advice, guidance and supports including as to how they might shield themselves so as to avoid being infected with the virus was targeted at the CEV populations

and those who were in contact with them. While I have not reviewed the specific advice, guidance and support issued directly by England and the rest of the UK, I would expect that these would have followed a similar model to NI informed by professional advice and in line with the relevant national guidance. To best of my knowledge the advice and guidance was consistent across the UK, however the arrangements with respect to assistance with essential food and medicines may have differed in how that support was provided. The Department worked closely with the Department for Communities (DfC) with respect to these arrangements as is described at paragraph 120.

105. The overall approach taken was first, to identify those at higher risk and inform them so they would be able to better manage their own risk and second, to put a programme in place with guidance on managing risk, and support to do so, alongside a wider package of NPIs to reduce transmission in the community. To put measures in place only for those at higher risk, without a wider package of NPIs to reduce community transmission was not regarded as an appropriate response.

106. In October 2020 as part of the Great Barrington Declaration[5], there were those who promoted targeting NPIs to the vulnerable group alone or implementing shielding alone as an option to reduce overall severe disease and deaths while allowing the infection to spread in all others. It was my view and in fact the collective view of UK CMOs that there were serious questions about the practicalities, ethics and indeed effectiveness of such an approach. SARS-CoV-2 is a highly transmissible infection with often minimal symptoms, it was therefore extremely difficult to successfully target and protect specific people or groups. It must also be recognised that identifying the vulnerable is an inexact science and the level of vulnerability and associated numbers of those affected changed through the pandemic. Ultimately the most effective way to reduce risk for the vulnerable and the wider population was to reduce overall community transmission. Many of those shielding lived in households or settings with others who could be at risk of introducing infection when community rates were high,

[5] Great Barrington Declaration (gbdeclaration.org)

and those requiring care and support services also had regular contacts from outside the home.

107. The list of diseases or conditions considered to be very high risk and listed in the first shielding letter issued from 27 March 2020 were:

- Solid organ transplant recipients
- People with specific cancers, as follows:
  - People with cancer who are undergoing active chemotherapy or radical radiotherapy for lung cancer;
  - People with cancers of the blood or bone marrow such as leukaemia, lymphoma or myeloma who are at any stage of treatment;
  - People having immunotherapy or other continuing antibody treatments for cancer; and
  - People having other targeted cancer treatments which can affect the immune system, such as protein kinase inhibitors or PARP inhibitors.
- People who have had bone marrow or stem cell transplants in the last 6 months, or who are still taking immunosuppression drug;
- People with severe respiratory conditions including all cystic fibrosis, severe asthma and severe Chronic Obstructive Airways Disease (COPD);
- People with rare diseases and inborn errors of metabolism that significantly increase the risk of infections (such as Severe Combined Immunodeficiency (SCID), homozygous sickle cell);
- People on immunosuppression therapies sufficient to significantly increase risk of infection; and
- People who are pregnant with significant heart disease, congenital or acquired.

108. The letter that issued to those who were at highest risk from the virus advised individuals who fell into this group to 'shield' themselves by staying at home and avoiding all face-to face contact for the next 12 weeks. The letter provided information about actions to take in order to do so; how to access further information and support, including through the NI Community Helpline; advice on

indoor exercise; and mental health tools as well as providing general information on the pandemic response.

109. People living with other underlying health conditions were identified at a UK-wide level as part of a wider clinically vulnerable group, not included in the shielding group but who should follow strict social distancing measures instead. This group included those who were:

- Aged 70 or older (regardless of medical conditions)
- Under 70 with an underlying health condition listed below (i.e. for adults this usually anyone instructed to get a flu jab as an adult each year on medical grounds):
  - Chronic (long-term) respiratory diseases, such as asthma, COPD, emphysema or bronchitis;
  - Chronic heart disease, such as heart failure;
  - Chronic kidney disease;
  - Chronic liver disease, such as hepatitis;
  - Chronic neurological conditions, such as Parkinson's disease, multiple sclerosis (MS), a learning disability or cerebral palsy;
  - Diabetes;
  - Problems with their spleen – for example, sickle cell disease or those who had their spleen removed;
  - A weakened immune system as the result of conditions such as HIV and AIDS, or medicines such as steroid tablets or chemotherapy;
  - Being seriously overweight (a BMI of 40 or above); and
  - Those who are pregnant.

110. The shielding policy included specific additional advice for those living with these individuals. The shielding advice was accompanied by CEV eligibility for and support with food and medicine deliveries, specific arrangements for GP follow-up and access to other services virtually. It included various other forms of support including statutory sick pay. The voluntary and community sector, many organisations, local communities and the Department for Communities played a major role in providing such support in a hugely impressive community response.

The approach to "shielding" is considered more fully in the UK CMO Technical report on the 19, Chapter 8, pages 255 to 259 [see Exhibit **INQ000203933**]. This extensive programme of shielding was essentially paused after the first wave.

111. Once the cohort had been identified, I corresponded directly with the CEV group on several occasions and provided updated advice on NI Direct communicating the changing risks and advising of revisions in the guidance. As described at paragraph 104, I believe this guidance and support was broadly similar across the UK although there were some differences in the timing of the advice given differences in levels of community transmission across the UK. Letters to the CEV group from myself were issued through GPs to those identified as clinically extremely vulnerable [see Exhibits INQ000130313, INQ000120706, and INQ000130315] via HSC Trusts to specific patient groups, who were known to them in March 2020.

112. Shielding advice was introduced by the Department on 25 March 2020. By 27 March letters were being issued to the CEV population by a combination of General Practitioners and HSC Trusts. A letter to GPs identified a list of diseases and conditions considered to be very high risk. GPs were asked to identify those patients on their patient lists who fell into this group. Guidance was available to assist practices to search and identify patients who did so. The bulk of letters were issued on 27 March 2020 by GPs. In addition, HSC Trusts issued letters to specific patient groups who were known to them in March 2020. In practical terms I understand there were there were some information and IT system challenges in Northern Ireland as described at paragraphs 121 and 122 and while HSC Trusts and General Practitioners will be better placed to advise, it may have taken a couple of weeks for all of these letters to be issued. The importance of those who were in the CEV population "shielding" had already been publicly communicated, however while it is difficult to measure the impact of any delay on those who had to wait a couple of weeks to receive their shielding letters, I fully appreciate that this must have been an uncertain and difficult time for these individuals. The CEV letters offered advice on staying safe [see Exhibits INQ000130313, INQ000120706, and INQ000130315] and enabled those in receipt to access support schemes being offered to the most vulnerable by the

Department for Communities (DFC). The only other practical advantage was in relation to Covid regulations (SR 2020 No.55) made on 28th March 2020. These regulations prohibited "*anyone from leaving the place where they are living without reasonable excuse. Examples of a reasonable excuse include the need to provide care or assistance to a vulnerable person, to travel for the purposes of work and to access critical public services.*"

113. There were subsequent changes to the definition of CEV in Northern Ireland, all these changes were informed by emerging evidence of people with certain underlying conditions being at high risk of severe disease. This evidence was considered by the UK Clinical Panel of Shielded with subsequent advice to UK CMOs which considered before approving any changes. All but one of which were agreed Nationally by the four UK CMOs:

- people with Motor Neurone Disease (MND) (added 2/4/20 – elsewhere in UK added at clinical discretion). As described at paragraph 103.
- people who have had a splenectomy (added 15/5/20 on advice from UK Clinical Panel for Shielded Patients to UK CMOs)
- those undergoing renal dialysis (added after 24/4/20 on advice from UK Clinical Panel for Shielded Patients to UK CMOs)
- Adults with Downs syndrome (added after 26/11/20 on advice from UK Clinical Panel for Shielded Patients to UK CMOs which was informed by recent evidence as described at paragraph 129, that indicated that adults with Downs syndrome were at greater risk of severe disease and therefore should that they should be regarded as in the high risk category, and
- Stage 5 chronic kidney disease (added after 26/11/20 on advice from UK Clinical Panel for Shielded Patients to UK CMOs

114. The groups which were added to the definition in April and May 2020 were sent a copy of the shielding letter and advice, first issued on 27th March, from myself. Groups added after the end of shielding on 31st July 2020 were updated on the guidance and advice from the date they were added to the CEV list. A statement was published on the Department's website on 18 May 2020, in which the Minister for Health advised that guidance on shielding was being actively

reviewed and would be updated before the end of the 12-week shielding period. Recognising how difficult shielding was, people were assured that it would last no longer than deemed clinically necessary [Exhibit INQ000348685]. I wrote to those who were Clinically Extremely Vulnerable in early June 2020 advising those who were shielding that, whilst Covid-19 still posed a high risk to those who are most vulnerable, as infection levels were falling, so the risk of exposure was significantly less. Given how difficult shielding was and the adverse impact, it was important that a proportionate approach was taken given the then lower rates of infection in NI while recognising that rates of infection varied across the UK. Accordingly, as described at paragraph 128, the guidance for Northern Ireland was updated so that from 8 June 2020, those who were shielding could spend time outside with people from their own household or one person from another household, whilst ensuring social distancing was observed. This updated shielding guidance would be in place until 30 June 2020 [Exhibit INQ000348686]. In a submission [Exhibit INQ000346714] to minister dated 16 June 2020 the Director of Primary Care advised the Minister of plans in England to pause shielding from 31 July 2020. The submission recommended that NI should follow suit. The submission incorporated evidence about the concerns of the shielded population identified in PCC research that I had commissioned as described at paragraphs 123 and 126, and my advice which was that "the rate of community transmission is such that it would be appropriate to pause the shielding advice here for all adults and children on 31 July." By 27 July 2020 there had been no recorded Covid-19 related deaths in NI for 14 days and, considering the small number of cases and absence of deaths it was decided that advice on shielding was no longer proportionate to the risks and could be replaced by advice to take extra precautions and to follow public health advice. Shielding was therefore paused from 31 July 2020 with the situation to be kept under review. The decision to pause shielding required Executive approval and the submission included a draft Executive paper to this end. The paper [Exhibit INQ000207253] was submitted to the Executive meeting held on 18 June 2020. The paper highlighted a need for some continued support beyond 31 July 2020, with helpline services to continue for the foreseeable future. HSCT support services also continued, and the Department again emphasised the package of mental health support resources which had been made available online. GP or hospital

specialist consultations remained available to everyone who had continuing concerns about their health. The minutes from the Executive meeting of 18 June 2020 [Exhibit INQ000348692] record that the Executive agreed to pause shielding from 31 July 2020. As described at paragraph 120, information and guidance for people who were Clinically Extremely Vulnerable, and for those who were in the wider clinically vulnerable category, was also available on the Northern Ireland Direct (NI Direct) website. This website was the primary course of advice and guidance for the public over the course of the pandemic including those who were shielding but both the Health Minister and I also issued advice for those who had been shielding [Exhibits INQ000373404 and INQ000348688]. While it is my view that the updated advice was clear, it was my experience that given the previous advice particularly in the early months of the pandemic with the introduction of shielding that it proved difficult to provide appropriate reassurance to those who had been previously shielding to resume more normal social interactions, navigate everyday activities and dynamically assess personal risk with appropriate precautions in keeping with the decision to pause shielding. This was entirely understandable, and I was aware that despite our best efforts to address, a significant number of those who were previously shielding felt that they were less than fully informed and supported and remained extremely anxious.

115. As mentioned at paragraph 103, the inclusion of MND patients in the definition of CEV was the only area where NI diverged from the rest of the UK in regard to the definition. As this was primarily a clinical consideration, the decision was made by me, although the Health Minister would have been advised and aware of the decision given that he was receiving communications on the issue from political representatives. The vulnerability and risk in patients with MND primarily relate to reduced respiratory capacity and difficulty clearing secretions. Many MND patients will require respiratory support in the course of their illness as indicated and therefore would probably have been identified by GPs for inclusion on the CEV list at their discretion. The inclusion of MND in the Northern Ireland definition of CEV was intended to offer additional reassurance to this population of approximately 140 people in Northern Ireland at any one time [Exhibit INQ000408200]. It is also important to note that NI probably issued more

shielding letters per head of population than other parts of the UK unrelated to the inclusion of MND.

116. For the rest of the UK, the issue of including Motor Neurone Disease in the definition of CEV was discussed at a meeting of the UK Clinical Panel for Shielding Patients on 28 April 2020 [Exhibit INQ000348675] which was attended by a representative from CMO Group. At the conclusion of the meeting the minutes record "Recommendation: Patients should be continued to be identified by GPs/Specialists for shielding on a case-by-case basis to reflect the varying degrees of severity of MND. To ask MNDA to collect/submit further data on outcomes for consideration by NERVTAG and SAGE. To work with RCGP and RCP to develop the e-learning resources to include awareness of MND with regard to the shielded patient list. While other jurisdictions did not subsequently add the those living with MND as a category in their CEV lists, those with MND in other jurisdictions continued to be considered for inclusion through clinician discretion or by the clinical interpretation of the definition of 'rare diseases' as outlined in correspondence to GPs and Hospital Specialist.

117. By October 2020, as part of our response, I proposed the formal establishment of a Clinically Extremely Vulnerable Operational Cell [Exhibit INQ000408127] within the Department to identify any emerging CEV group and cohorts in NI and to focus on their specific needs with a view to tailoring individual correspondence. While shielding had been paused on 31 July 2020, it was in my view important that the decision to do so was kept under active review and to ensure that the advice to the people in the CEV group and any new evidence that emerged on those who may be at high risk of severe disease was appropriately updated and properly communicated. In an urgent written Statement on 23 October 2020 the Minister informed the Assembly that I had looked at the position again in light of the increased numbers of cases of Covid-19 in NI. Since shielding was first advised, several important changes had taken place in our approach to managing Covid-19 and reducing its transmission. This included a greater awareness of the importance of social distancing, the requirement to use face coverings, Covid-19 secure workplaces and greater adherence to respiratory and hand hygiene. After careful consideration, including the consideration of the advice of the CEV Cell, I

advised the Minister that shielding should remain paused. The statement noted that the position would be kept under review and the advice and guidance updated accordingly.

118. This dedicated CEV Cell, chaired at Deputy Chief Medical Officer level, was established to facilitate this continuous review and to formulate policy and guidance relating to the CEV population. In reviewing the advice, the CEV Cell took account of the latest evidence from the epidemiology; the status of the wider restrictions in place for the general population; and also took cognisance of the advice for CEV people that was in place elsewhere in the UK. My advice to the Health Minister and the Executive in regard to the CEV population was in turn informed by advice from the DCMO Cell Chair. I understand the CEV Cell reviewed the policy position on shielding on a regular basis as described as paragraph 128, subsequently providing advice and recommendations to me and in turn the Minister.

119. In October 2020 a risk prediction model called QCovid® was released in England that estimated a person's combined risk of catching coronavirus and being admitted to hospital, as well as their combined risk of catching coronavirus and dying. This further informed the updating of the conditions such as the identification of the vulnerability in adults with Downs Syndrome and in people with stage 5 chronic kidney disease. This resulted in people in these groups being added to the CEV list in NI in November 2020. After evidence emerged on relative risk for either single or multiple conditions for some patients, some of whom were then prioritised for vaccine rollout. Importantly, QCovid® also included a measure of socio-economic deprivation. Socio-economic deprivation is recognised as being linked to public health outcomes and several underlying health conditions are more prevalent in those in lower socio-economic groups and it was important that this was considered alongside clinical data as a component of risk.

120. The policy on shielding to protect the most vulnerable also included the ongoing review of the appropriateness and proportionality of these measures given the significant negative impact in terms of loneliness, isolation and mental health.

During the pandemic, the letters that issued to people identified as Clinically Extremely Vulnerable provided a range of information including sources of advice and support with access to medicines and food deliveries, support for mental health and well-being and financial assistance and support when returning to the workplace. This information and guidance for people who were Clinically Extremely Vulnerable, and for those who were in the wider clinically vulnerable category, was also available on the Northern Ireland Direct (NI Direct) website. This website was the primary source of advice and guidance for the public over the course of the pandemic including those who were shielding. As described at paragraph 435 a Northern Ireland Covid-19 Community Helpline to support anyone feeling isolated or vulnerable including those who were shielding was established and provided support with a range of issues including access to food and medicines. The Department for Communities played a central role in arrangements to support communities and people during the pandemic. The Department worked closed with the DfC from early May 2020 until 31 July 2020 to put arrangements in place for priority access to online grocery shopping slots for those who were Clinically Extremely Vulnerable. This included food box deliveries to those who were unable to access food through online shopping, family, friends or local support networks including those who were shielding. The Department worked with the Department for Communities to put arrangements in place for priority access to online grocery shopping slots for those who were Clinically Extremely Vulnerable, in place from early May 2020 until shielding paused on 31 July 2020. As with other UK nations, as CMO with the advice from the NI dedicated CEV Cell, I continued to review and advise the Health Minister on the recommendations in relation to "shielding and the CEV cohort" in NI which subsequently informed policy decisions and guidance.

121. In the first wave of the pandemic there were some information and IT system challenges in Northern Ireland in identifying those at significant increased risk including the CEV population compared to GB as it was not possible to carry out an automated clinical records search. The quality, breadth and completeness of data available on those with clinical vulnerabilities impacted on the accuracy of

the list, however, these initial problems did improve throughout the pandemic. For the future, more comprehensive data sets alongside intelligence from GPs and those clinicians in Trusts providing specialist care to better inform lists and targeted advice to those who were clinically extremely vulnerable is required. While out with my particular area of competence, or direct responsibility in NI this will require further work on data access, read across of coding between datasets, record linkage and in particular alignment with the technical skills to analyse that data. The encompass programme is a clinical and operational transformation programme with Electronic Patient Record (EPR) software supplied by Epic Systems at its heart. The flagship programme will see encompass replace or link with the vast majority of clinical systems currently in operation in Acute and Community Care settings, replacing existing, often “end of life” (unable to be upgraded or updated) Patient Administration Systems (PAS) and clinical record systems across HSCNI. The EPR incorporates secondary health care, community nursing, mental health, and social care information. NI is the first system to adopt this unified approach to an electronic health record at Integrated Care System level and is the first in the UK to incorporate Social Care as part of this endeavour. Patients and Service users will be able to access their health and social care records, such as letters, supporting information, lab results and radiology results. They, or a carer if permitted, will also be able to make and view appointments and track tasks. The programme went live in the South Eastern Health and Social Care Trust on 9 November 2023, Belfast Trust is planned to Go-Live on 6 June, 2024. Subsequent Go-Lives are set with Northern Trust for Autumn 2024 and Southern and Western Trusts in Spring 2025. It is envisaged that encompass will help HSCNI to work more effectively and efficiently through regional standardisation based on best practice, and will create better experiences for those receiving, using and delivering services. The single digital integrated record will support initiatives on patient safety, health outcomes, and will assist in the identification and targeting of information to groups of people with certain conditions including those who were extremely clinically vulnerable during the pandemic. The system will provide “near real time” data which can be used to benchmark services across Northern Ireland and with other Epic System users in the UK and Worldwide.

122. Given the urgency of the requirement to identify this cohort of people with certain conditions, including those who were extremely vulnerable during the pandemic, clinicians in primary and secondary care and their teams worked diligently and at pace to identify these individuals. Consequently, there was some duplication of correspondence. Again, this was an example of the collective working between the Department, the then HSCB (now SPPG), the secondary and tertiary care specialist services in hospitals, and primary care teams across NI. Throughout this time the Health Minister, myself and the Department regularly communicated with the CEV population, ensuring they were aware of the latest developments with shielding and the latest guidance which was also updated on the Government NI Direct website.

123. On 27 May 2020, and following discussions with her over the previous week I emailed [Exhibit INQ000346716] the Chief Executive of the Patient and Client Council asking that the council undertake research to "inform the relaxation of some of the current restrictions around outdoor exercise and possible subsequently meeting family outdoors in small numbers with appropriate safeguards and precautions". The email indicates that the proposed research was supported by the Health Minister and by the FM and the dFM.

124. The Health Minister published a statement encouraging people who were Clinically Extremely Vulnerable, and those supporting them, to participate in the survey, the aim of which was to understand the impact shielding has had on individuals, to inform the steps and processes that must be considered now and in the future, and to ensure that the voice of those impacted by shielding was heard [Exhibit INQ000348702].

125. In my letter to the CEV population which issued in early June to advise of a change in shielding advice, also advised recipients that I was leading a programme of rapid engagement with people who were shielding so that, in considering the future of shielding, there would be a clear understanding of the issues those who were shielding faced. The letter provided details on how to

participate in the PCC survey online, by post and by telephone. The final PCC survey report [see Exhibit [INQ000344088] was published in July 2020.

126. The findings of the survey [See Exhibit INQ000344088] indicated that fear of Covid-19, and the risk it represented, was the dominant concern among those surveyed. In addition, shielding appeared to have had detrimental social and psychological effects on a significant group of respondents, although relatively very few of those surveyed mentioned a need for professional support or counselling. Those who were shielding prioritised being kept informed with clear advice and guidance, along with the scientific rationale for this advice. A considerable number of respondents felt that the shielding community was often 'forgotten' or 'ignored' as changes to guidance and restrictions for the wider population were announced. The need for advice to CEV people was kept under continuous review and took account of the research undertaken by PCC including the mental health impact of shielding. The subsequent advice which I provided to the Health Minister and the Executive (detailed in paragraph 114 above) was directly informed by this research alongside other factors such as the trajectory of the pandemic, the availability of therapeutics, progress with vaccination, community transmission levels and pressure on the health system. As I have described, the findings of the PCC survey clearly demonstrated the significant adverse social and psychological impacts of shielding and specifically was a significant factor contributing to my advice to the Minister and the Executive to pause shielding in July 2020 and informed my discussions with UK CMO colleagues on the balance of benefit and harm. I also established the CEV Operational Cell specifically to ensure that all advice and guidance was kept under regular review and updated and that people who were CEV were kept informed and updated.

127. At my request, membership of the Department's dedicated CEV Cell included representation from the Patient and Client Council to ensure that the patient voice was heard in decisions around advice for CEV people and this input was an important consideration to ensure a proportionate approach was taken and that the advice addressed the concerns of CEV people. The PCC was not the

decision maker in regard to shielding and CEV issues, but their input was valuable for the reasons set out above. I believe the input of the PCC was an important consideration and factor in ensuring a proportionate approach was taken to shielding and in addressing concerns of CEV people. The PCC played a pivotal role in the development of a Distance Awareness Scheme which I had endorsed and was launched by the Health Minister on 24 February 2021. The scheme was modelled on a scheme which had been developed in Wales and was delivered by the PCC in partnership with community pharmacies, general practices (GPs), Health and Social Care Trusts, and in the voluntary and community sector through the Northern Ireland Council for Voluntary Action (NICVA). My endorsement of the scheme and recommendation to the Health Minister was in part a response to the research which I had commissioned from the PCC in June 2020 which had highlighted the concerns of CEV people. The scheme ostensibly consisted of badges and signage which would remind members of the public of the importance of social distancing. As part of the launch the Health Minister stated "*The badge can be worn by anyone to signify that they wish to maintain social distancing and it is not meant to be an identifier of someone who has been shielding or may have any specific health condition. This is an opportunity for members of the public to become more involved in promoting the social distancing message and to help our efforts to halt the spread of Covid. There is a very simple message behind the scheme – show your concern and respect for other people by maintaining social distancing.*"

128. People who were shielding were advised that the safest course of action was to stay at home at all times and avoid all face-to-face contact, except from carers and healthcare workers who they must see as part of their medical care. Prior to the pausing of shielding 31 July 2020 the advice to those shielding had been relaxed to include for example enabling those shielding to spend time outside and to form a support bubble with one other household. On the day shielding was paused I summarised the updated advice to those who were shielding in a press release as follows: "*I am urging everyone who has been shielding to be vigilant. The risk of being infected by the virus has reduced but your underlying vulnerability to it still remains. Caution is still the order of the day. This means minimising any risk as much as possible, and being aware that all contacts with*

the outside world must be managed really carefully. Keep your distance from others, wash your hands regularly and often, don't touch your face, and avoid touching hard surfaces if you are out." [Exhibit INQ000373404]. Although shielding was never reintroduced the shielding population were at later dates provided with advice on measures to safeguard themselves during periods when Covid was on the increase. This is covered in more detail at paragraphs 130-131 below. Due to the decline in community transmission during the first wave, there were easements to shielding advice from 6 July 2020 to allow for meetings of up to 6 people outdoors and to form a support bubble with one other household. This easement in guidance and the Covid-19 regulations applied to CEV people and the entire population. As described at paragraph 114, by 27 July 2020 there had been no recorded Covid-19 related deaths in NI for 14 days and, considering the small number of cases and absence of deaths it was decided that advice on shielding was no longer proportionate to the risks and associated adverse impact and "shielding" could be replaced by advice to take extra precautions in following the public health advice. Shielding was therefore paused from 31 July 2020 with the situation kept under review. In an urgent written Statement on 23 October 2020 the Health Minister informed the Assembly that I had looked at the position again in light of the increased numbers of cases of Coronavirus in NI. In this statement the Health Minister outlined that, since shielding was first advised, a number of important changes had taken place in our approach to managing the pandemic and reducing the risk of transmission. This included a greater awareness of the importance of social distancing, the requirement to use face coverings, Covid-19 secure workplaces and greater adherence to respiratory and hand hygiene. After careful consideration, I advised the Health Minister that shielding should remain paused. The statement also noted that the position would be kept under review. In the period between 31July 2020 and 23 October 2020, the pausing of shielding was kept under continuous consideration including as part of responses to a number of Assembly questions, correspondence from political representatives on behalf of constituents and questions from members of the public. Consideration of the issues being raised resulted for example in a 4 UK CMO consensus statement being issued on 23 August 2020 (https://www.gov.uk/government/news/statement-from-the-uk-chief-medical-officers-on-schools-and-childcare-reopening). The overall policy and the approach to

shielding was being reviewed by the four UK CMOs at their meetings on 16 September 2020 [Exhibits INQ000385575 and INQ000469771, and Exhibits INQ000469774 and INQ000385584 and 24 September 2020 [Exhibits INQ000469777 and INQ000385606 and Exhibits INQ000469780 and INQ000385606]. At these meetings the four UK CMOs considered proposals to move to a way forward for shielding advice based on the tiering system being worked up in England – essentially tiers 1 -3 all contain increasing degrees of 'shielding-lite' guidance with tier 3 still falling short of full shielding advice, but with the latter in reserve in case areas were very badly affected. This approach was then considered at a meeting of COBR involving the Devolved Administrations held on 1 October 2020 which considered a DHSC/Cabinet Office paper on the future arrangements to protect the Clinically Extremely Vulnerable including shielding [Exhibit INQ000053886 In general, this paper reflected the discussions which had been taking place at meetings of the four UK CMOs including papers which had been tabled during this period at meetings of the four UK CMOs. There was also ongoing discussion at the 'DA Forum on Shielding and Non-Shielded Vulnerable' and the UK shielding group. In October 2020, the Department was also in the process of formally establishing a Clinically Extremely Vulnerable Operational Cell within the Department to identify any emerging CEV group and cohorts in NI and to focus on their specific needs with a view to tailoring individual correspondence. This dedicated CEV cell, chaired at Deputy Chief Medical Officer (DCMO) level, met for the first time on 21 October 2020 and was established to facilitate this and to formulate policy and guidance relating to the CEV population. In reviewing the advice, the CEV Cell took account of the latest evidence from the epidemiology; the status of the wider restrictions in place for the general population; and also took cognisance of the advice for CEV people that was in place elsewhere in the UK. My advice to the Health Minister and the Executive in regard to the CEV population was in turn informed by advice from the DCMO Cell Chair. In October 2020 a risk prediction model called Qcovid® was released in England that estimated a person's combined risk of being infected with Covid-19 and being admitted to hospital, as well as their combined risk of being infected with Covid-19 and dying. This further informed the updating of the conditions such as the identification of the vulnerability in adults with Downs Syndrome and in people with stage 5 chronic

kidney disease. This resulted in people in these groups being added to the CEV list in NI in November 2020. After evidence emerged on relative risk for either single or multiple conditions for some patients, some of whom were then prioritised for vaccine rollout. Importantly, Qcovid® also included a measure of socio-economic deprivation. As described at paragraphs 114 and 120, information and guidance for people who were Clinically Extremely Vulnerable, and for those who were in the wider clinically vulnerable category, continued to available on and was updated on the NI Direct website. This website remained the primary source of advice and guidance for the public over the course of the pandemic including those who were shielding. Examples of further reviews, updates and changes to the CEV list of people and advice are described in paragraphs 129 to 133.

129. As indicated above the CEV list was kept under continuous review and on 26 November 2020, the Department announced that adults with Down's syndrome had been added to the Clinically Extremely Vulnerable list as recent evidence indicated that adults with Down's syndrome were in the high-risk category for severe disease. I wrote to adults with Down's syndrome to advise them that they had been included on the list and advised what this meant for them [see Exhibit INQ000276298]. An easy read version of the advice was also available.

130. On 23 December 2020 the Department announced that it had updated the advice to Clinically Extremely Vulnerable people to help them keep safe through the Christmas period and beyond. Clinically Extremely Vulnerable people were reminded to consider very carefully any plans for a Christmas Bubble over the festive period, with the safest option being to not form a Christmas bubble, and to avoid attending shops, pharmacies, and hospitality settings unless absolutely necessary.

131. The advice in relation to Clinically Extremely Vulnerable people attending the workplace was also changed. From 26 December 2020, Clinically Extremely Vulnerable people who were working and unable to do so from home, were advised not to attend the workplace. This advice was provided by a subgroup of the CEV cell and was endorsed by cell members for the consideration of the

CMO and Health Minister. It was in place for 6 weeks initially, with a review after 4 weeks, in line with the review of restrictions more generally. This advice was based on my view that the new variant of the virus which was then in circulation coupled with the pressure HSC services were experiencing, meant that the risks associated with Covid-19 were elevated. This strengthened advice was intended to offer enhanced protection from Covid-19 to the most vulnerable people in our society. However, CEV people were not advised to stay permanently indoors, and I encouraged CEV people to continue to go outside for exercise, provided they observed social distancing when they did so.

132. In a further statement on 24 March 2021 the Department announced that, in recognition of the improving picture in terms of the activity of the virus in the community, a graduated easing of the advice for Clinically Extremely Vulnerable people was to commence on 12 April 2021. The first step involved the easing of the advice around going to the workplace. Future steps saw the gradual easing of other elements of advice for Clinically Extremely Vulnerable people, linked to easing of restrictions more generally. A letter was issued to people who were Clinically Extremely Vulnerable which could be used as evidence for employers [see Exhibit INQ000276299].

133. From 30 April 2021, there was further easing of guidance for people who were Clinically Extremely Vulnerable across a range of settings, including socialising in gardens, overnight stays in self-contained accommodation, retail, gyms and indoor facilities and hospitality. The advice given to Clinically Extremely Vulnerable people was that they may participate in the gradual re-opening of society. However, they were advised that it was vitally important that they continued to exercise great care, for example going to places at quieter times, wearing face coverings and observing social distancing. During the pandemic, the NI Direct website provided information and advice for Clinically Extremely Vulnerable people, with information updated by the Department as guidance and advice changed and developed.

134. It is difficult to quantify the impact of shielding on either SARS-CoV-2 transmission, Covid-19 outcomes or wider impacts, because its early and

universal application for relevant groups left no comparator groups and it would it have been unethical to do so. As discussed in the CMO Technical Report [see Exhibit INQ000203933], there were some important principles and learning for the future in respect of shielding. At paragraph 26, I have described the specific learning on shielding detailed in the PPC survey I commissioned. Professionally, I was especially concerned about the significant adverse social and psychological consequences respondents had cited and I communicated my concerns to UK CMO colleagues to ensure wider awareness as I was not aware of any similar survey being carried out elsewhere in the UK. Respondents were clear about the need to be kept informed and a considerable number felt they were not fully considered as changes to guidance and restrictions for the wider population were announced. The research by the PCC informed reviews of the advice to CEV people, as well as my own advice to the Health Minister and the Executive As described at paragraph 127, the PCC was represented on the Department's dedicated CEV to ensure that the patient voice was heard in decisions around advice for CEV people and I endorsed the Distance Awareness Scheme which they played a pivotal role in developing. And which was, in part, a response to the concerns of CEV people. Importantly, this work and experience in NI has reaffirmed my view that the best and most effective way to protect the CEV and CV in any future pandemic is to reduce community transmission with shielding only as an addition to, rather than an alternative to other wider NPIs. At the outset of a pandemic with a population with no prior exposure to the virus, no immunity and with high-risk comorbidities for a new disease, in discussions with UK CMO colleagues I believed it was essential to act on a precautionary basis and swiftly to advise people of their potential risk based on the understanding of the disease at the time. This formed the basis of our advice to respective Ministers across the UK, and I believed this was the correct course of action. In my view appropriately, an iterative approach was needed in the continuous review and revalidation of the list of clinically vulnerable as experience of the disease was gained in populations with different health profiles and other underlying health conditions. Communication about clinical vulnerability was complex and experience from the PCC survey in NI confirmed this and also the long-term negative impacts of shielding. After and in response to the PCC survey communication to the CEV population was approached differently in that

there was a much greater emphasis on individuals assessing their own circumstances, situation and risks to provide a greater sense of agency and control in minimising risk and providing advice to mitigate the negative impacts of isolation and loneliness of shielding amongst the CEV population part of which arose for many of them from living in a perpetual state of fear of participating in every day pre-pandemic activities. The level of fear which existed amongst the CEV population following lockdown and the introduction of shielding, which were broadbrush responses affecting whole populations, was significant unfortunately and while regrettable was then regarded as necessary. In the first wave, the CEV community were initially effectively being advised to largely isolate themselves from family, friends and others and a range of measures were introduced to support them in doing so. After this period, it was difficult in the context of the ongoing pandemic to communicate to many CEV with more nuanced advice and provide reassurance that for many of the CEV they could relatively safely engage in a wider range of activities and interactions which would reduce their levels of isolation, loneliness and the negative impacts on their mental health. It was essential that communication about the shielding advice was clear as to who was vulnerable and why, and particularly if this changed. It was also important that the guidance was clear as to what people were being advised and why. Communications also needed to be accessible to different groups.

135. Some of the early messages on clinical risk and vulnerability proved difficult to reverse given that as the evidence base evolved, some groups that had previously been thought to be high risk would have had their overall risk profile reduced as a result of Covid-19 vaccination and/or access to antiviral and neutralizing monoclonal antibody treatments became available. As described at paragraph 114, it was my experience that advice in the early weeks and months of the pandemic to people regarded as CEV and a high risk of severe disease to "stay at home" and to effectively restrict almost all but essential social interaction with the introduction of shielding proved difficult to reverse. It was challenging to provide appropriate reassurance to those who had been previously shielding to resume more normal social interactions, and to begin to resume some everyday activities with appropriate precautions. This was particularly the case in supporting people to assess their own changing personal risk from Covid-19 with

changes in the level of community transmission, population immunity and the roll out of the vaccination programme and new treatments for Covid-19. In large part I believe this was a consequence of the detrimental social and psychological effects of shielding and the fear and anxiety caused, however while we attempted to communicate updated advice as effectively as we could, my experience was that a significant number of the CEV community felt they could have been better informed and supported. There were also a wider group of people who were not formally clinically extremely vulnerable but who were particularly concerned for their health or that of their vulnerable close contacts and the advice on shielding may have added to their concerns and some may consequently have followed the shielding advice. As a consequence, early interventions to protect the vulnerable, regardless of whether they are formally lifted, may effectively have to stay in place for many over a much longer period due to ongoing concerns about risks. Understandably many people who were clinically extremely vulnerable or clinically vulnerable continued to express significant concern with respect to activities of daily life such as shopping and concerns that other people were not adhering to social distancing or the wearing of face coverings if not exempt. Again, others expressed concern about returning to the workplace and the adequacy of Covid-19 secure workplaces. Even as the relative risk reduced because of the roll out of Covid-19 vaccines, the availability of new antivirals and increasing levels of population immunity due to previous infection all of which contributed to weakening the link between infection and severe disease, reassuring people at high risk of these changing circumstances was understandably not straightforward.

Covid-19 in Pregnancy

136. To assist the Inquiry in its consideration of the impact of Covid-19 in pregnancy, I have provided a summary of my understanding of the evolving knowledge and associated evidence. This is however an area of expert clinical practice which is

out with my own professional experience. Pregnant women were no more or less likely to contract SARS-CoV-2 infection, however at the outset of the pandemic there was concern, as with other viral illnesses, including influenza and varicella, that the risk of developing severe disease is increased in pregnant patients compared with non-pregnant women, particularly if they contract the infection in the third trimester of pregnancy. This was subsequently confirmed.

137. As a consequence, at the outset of the pandemic extensive work was undertaken across the UK with the RCOG and representative organisations and trade unions to develop Covid-19 guidance for pregnant women especially those working in environments such as health and social care where they might be exposed to Covid-19 infection and to ensure an evidence informed common approach across the UK [Exhibit INQ000280449]. To the best of my knowledge, there was an agreed common UK approach. Colleagues in Workforce Policy Directorate within the Department who lead the Workforce Policy Cell will be best placed to provide further detail. In NI in the first wave of the pandemic the Workforce policy cell engaged directly with key stakeholders including the Human Resource Directors in Trusts and Trade Union representative organisations to develop and disseminate appropriate evidence-based guidance [Exhibit INQ000408124]. This guidance was produced to support both employers and pregnant women with the risks associated with Covid-19 at work. The guidance advised that pregnant women were considered clinically vulnerable and employers should carry out risk assessments to determine if they could continue working. The guidance recommended a more precautionary approach for pregnant women over 28 weeks' gestation or with underlying health conditions that place them at greater risk of severe illness from Covid-19. This included consideration of redeployment and maximising the potential for homeworking, wherever possible. Where adjustments were not possible and alternative work could not be found, the woman should be suspended on paid leave.

138. SARS-CoV-2 infection in pregnancy was subsequently demonstrated to be associated with a higher risk of morbidity and mortality for both mother and foetus compared with pregnant women without infection. There was an increased risk of developing severe disease requiring respiratory support, admission to

intensive care and ventilation compared with those who are infected and not pregnant. The diagnosis and management of Covid-19 in pregnancy is, for the most part, the same as in non-pregnant patients. In the UK the Royal College of Obstetricians and Gynaecologists maintained a frequently updated guideline on managing Covid-19 in pregnancy [Exhibit INQ000280483].

139. Severe disease during pregnancy as described in paragraph 138 was typically associated with late second or third trimesters. A UK national cohort study of women admitted to hospital with symptomatic Covid-19 in pregnancy showed that most were in the second half of pregnancy and more than three quarters were in the third trimester [Exhibit INQ000408126]. Linked data from Scotland [Exhibit INQ000315522] shows that, while infections occur evenly throughout pregnancy, 7% of first trimester infections were associated with hospital admission, compared with 11% in the second trimester, and 34% in the third trimester. Risk factors for severe disease are similar to those in non-pregnant individuals and include age over 35, obesity, minority ethnicity, and comorbidities, including pre-existing lung conditions, hypertension, and diabetes. The increased risk associated with ethnic minority backgrounds was found with women who were pregnant and also in those who were not, with health inequalities and socioeconomic factors proposed as contributing factors. However, ethnic disparities in hospital admission rates with Covid-19 in pregnancy were not consistently reflected in higher risks of severe infection. Severe infection in pregnancy was most consistently associated with older maternal age, raised body mass index, and chronic hypertension.

140. The patterns of disease in pregnancy changed over the periods in which different SARS-CoV-2 variants were predominant [see Exhibit INQ000408126]. These increased risks in pregnancy became more marked with successive variants of SARS-CoV-2 and were highest for the Delta variant (2 4) which is consistent with greater risk of more severe disease in the general population associated with the Delta variant. During the time period when the Delta variant was dominant, both the number and proportion of severely or critically ill pregnant women increased with similar changes in severity reported in the UK, Italy, and the Netherlands. Compared with periods where wild type (original Wuhan strain of the virus)

SARS-CoV-2 was prevalent a US study reported that pregnant women were 11% more likely to have moderate to severe infection if infected during an Alpha prevalent period, and 9% more likely during a Delta compared with an Alpha period [Exhibit INQ000408129]. Those admitted to hospital in the Alpha period were more likely than those admitted during a wild type period to require respiratory support (27.2% versus 20.3%), have pneumonia (27.5% v 19.1%), and be admitted to intensive care (11.3% v 7.7%). Women admitted during the delta period had further increased risk of pneumonia when compared with the alpha period (36.8% v 27.5%). In the period during which the delta variant predominated in the UK, 16% of symptomatic pregnant women admitted to hospital were admitted to an intensive care unit, and one in five of all patients receiving Extracorporeal Membrane Oxygenation (ECMO) were women who were pregnant or postpartum. The risk of severe disease among unvaccinated women during the omicron period was comparable with that observed during the wild type period.

Prognosis of Covid-19 in pregnancy

141. The prognosis of Covid-19 varies according to trimester of infection, and data from the Scottish national cohort study showed rates of admission to hospital varying from 3% to 16% with infection in the first trimester, to 7-28% in the second trimester, and 28-54% in the third [see Exhibit INQ000315522]. Outcomes for women not admitted to hospital were good, although pregnant women with Covid-19 were reported to be at increased risk of developing pre-eclampsia, compared with women giving birth without Covid-19. Results from the INTERCOVID prospective longitudinal study suggested the association is independent of any risk factors (including Covid-19 severity and pre-existing conditions [Exhibit INQ000408130]. Pre-eclampsia and Covid-19 were associated independently of preterm birth, perinatal morbidity and mortality, as well as adverse maternal outcomes.

142. As of 17 January 2022, the Centers for Disease Control and Prevention reported that about 10% of pregnant women with Covid-19 gave birth preterm [Exhibit INQ000408131]. Among women admitted to hospital with symptomatic Covid-19

in pregnancy, rates of preterm birth are more than 20%, with most of the excess resulting from iatrogenic deliveries. Perinatal mortality rates are reported to be more than fourfold higher among pregnant women with SARS-CoV-2 within 28 days of giving birth, compared with pregnant women without SARS-CoV-2.

Covid-19 vaccination in pregnancy

143. In December 2020 at the start of vaccine rollout, JCVI did not initially recommend vaccination for women who were pregnant [Exhibit INQ000408132]. At that time, although the available data did not indicate any safety concern or harm to pregnancy, JCVI noted that there was insufficient evidence to recommend routine use. JCVI also exercised caution when giving advice on other issues but updated such advice with evolving evidence and when further evidence came to light. As further data were obtained, guidance was updated, initially recommending consideration of use where the risk of exposures to SARS-CoV-2 infection was high, or where women had underlying conditions that put them at very high risk of serious complications of Covid-19 [Exhibit **INQ000408135** before moving to recommending vaccination in all women in pregnancy. Pregnant women were subsequently designated as a priority group for vaccination in December 2021 following evidence of increased risk of complications, including maternal death and stillbirth, following Covid-19 infection in the third trimester. [Exhibits **INQ000376222** and INQ000408134]

144. While this was an evidence-based approach to vaccine rollout in a potentially vulnerable group, the evolving messaging was misused by some groups to undermine vaccine confidence in pregnancy. With the benefit of hindsight, the decision to encourage vaccination in pregnancy could have been taken earlier, if the data (which latterly became available) had been known at that earlier point. Vaccination rates remain low in pregnant women and was a significant cause for concern. There was extensive work undertaken in NI and across the UK to encourage and promote vaccine update in pregnancy, with rates of uptake being discussed and considered at the NI Covid-19 Vaccination Oversight Board which I chaired.

Abortion Services

145. I have considered the availability of abortion services in NI during the pandemic and whether women still had to travel to other parts of the UK for abortion services during this period given in my professional view the then inadequacy in provision in NI. In considering these issues I have also outlined the relevant legal context regarding abortion provision in NI at that time. Exhibit INQ000068743 contains internal Department of Health and Social Care (DHSC) briefing to the CMO for England (ahead of a meeting of UK CMOs on 8 April 2020) regarding plans to discuss with me certain difficulties that were being faced by English abortion providers in continuing to deliver a long-standing arrangement which had enabled NI women and girls to access their services free of charge. While I would not have been sighted on this DHSC briefing document prior to this Inquiry, I can confirm that a discussion took place with the CMO for England along the lines contained therein, regarding what might be feasible during the pandemic within my remit as CMO to support the local delivery of abortion services, which had very recently been made lawful in NI. Those arrangements with English (and Welsh) abortion providers had been deemed necessary and were funded by the UK Government since 2017 in the ongoing absence of any legal framework for the lawful provision of abortion services in NI (except in very limited circumstances). In my professional view given the inadequacies of the then abortion services in NI this was appropriate.

146. The Abortion (Northern Ireland) (No.2) Regulations 2020 ("the 2020 Regulations") were introduced by the UK Government and came into force on 31 March 2020, providing the legal framework under which abortion services could now be provided. It was acknowledged that the normal process of commissioning and implementing the services permitted under this new statutory framework would take time, and that the prior existing arrangements were therefore to remain in place whereby women and girl's resident in NI could continue to be funded for travel to England or Wales for an abortion if they wished to do so until the service was commissioned locally.

147. However, the commissioning of any abortion services, even on a temporary basis, would require prior Executive agreement under the Ministerial Code on the basis that this was a significant or controversial matter and outside the scope of the agreed Programme for Government. Consequently, it was the Department's understanding that a Minister could risk breaching the Ministerial Code were they to act unilaterally to commission services without referring such matters to the Executive. This statutory requirement to refer such matters to the Executive was subsequently removed – specifically in respect of abortion services – through further Regulations introduced by the UK Government in May 2022, which ultimately enabled the NI Secretary of State to issue an instruction during a further period of suspension of the Executive which in turn led to the commencement of commissioned abortion services from December 2022.

148. By early April 2020, while the new Covid-19 travel restrictions did not prohibit people leaving home or travelling for medical reasons, the Department recognised that they would make it difficult for women in NI to travel to England to continue to access abortion services. A telemedicine Early Medical Abortion (EMA) service was made available to women in England by DHSC, as a response to the potential impact of the pandemic on access to EMA services resulting from travel restrictions and social distancing measures in England. In the period leading up to the first wave of the pandemic the Northern Ireland Office were consulting on the draft regulations. To mitigate any potential adverse impact from preventing women in NI travelling to England for EMA services, due to the restrictions on domestic travel, the Department proposed to the Northern Ireland Office during March 2020 that it should consider an amendment to the draft regulations to enable women in NI to have access to the telemedicine service in England. The Northern Ireland Office declined this request, and the final legislation which came into effect in NI from 31 March 2020 therefore did not make automatic provision for a telemedicine service.

149. The Department, therefore mindful of the potential adverse impact on women in NI, submitted a paper to the Executive on 3 April 2020 seeking agreement in line with the requirements the Ministerial Code to commission a telemedicine Early Medical Abortion service in NI for the duration of the pandemic, similar to the

service which was being provided in England. The Executive did not reach agreement on this proposal. In effect, this meant that any services being provided under the new legal framework were on a non-commissioned basis. As the position was not resolved by the Executive, NI's five HSC Trusts began to introduce a non-commissioned, limited EMA service for women in NI from early April 2020. In the absence of formal commissioning and additional funding, this limited service (i.e. available only up to 10 weeks' gestation) was made possible due to a downturn in Trust sexual health and family planning services linked to the pandemic response.

150. It was in this context that I discussed the issues referred to in Exhibit INQ000068743 with the CMO for England on 8 April 2020. The legal and political barriers to the commissioning of a temporary abortion service were acknowledged, and I outlined the details of the Departments plans to address and the correspondence I planned to issue to NI Trusts and medical professional bodies the following day concerning the position on abortion services. I issued this correspondence as planned to NI Trusts and medical professional bodies in April 2020 [Exhibits INQ000130384, INQ000137397, INQ000114876, INQ000114877, INQ000114878, INQ000114879, INQ000114880, INQ000114881, and INQ000114882] which confirmed subject to The Abortion (Northern Ireland) Regulations 2020, terminations could now be carried out lawfully and set out the process for notification of terminations. I further advised that it is for a medical practitioner to assess, on a case-by-case basis, using their professional judgement as to whether the individual woman's clinical circumstances meet the grounds for a termination of pregnancy in NI as provided for in the Regulations. This is particularly relevant during the period of the Covid-19 pandemic given the guidance on social distancing and the restrictions on travel, which women are encountering, currently curtailing them from travelling to avail of the interim services provided in England. The Department's position on the future commissioning of any services to replace the interim service will be confirmed as soon as possible.

151. It was clear that the non-commissioned Trust EMA services would not be a sustainable basis for the provision of abortion services in the long term, as

Ministerial authorisation on would ultimately be required for the full range of services to be commissioned in line with both the legislative requirements and demand. Indeed, several Trusts experienced prolonged pauses in their EMA provision over the course of the pandemic, due to a lack of resilience in the absence of normal commissioning (i.e. funding and monitoring) arrangements. During these periods, women requiring access to EMA services within a Trust area where services were paused were either seen at a neighbouring NI Trust (where cover was available within limited capacity) or referred to the British Pregnancy Advisory Service (BPAS) for services in England and Wales. Given that only EMA services were being provided from April 2020 on a limited, non-commissioned basis, other elements of the services permitted under the 2020 Regulations were not able to be provided locally during the pandemic (other than in very limited circumstances, such as cases of immediate medical necessity). While this was a far from optimal arrangement for NI women and girls requiring access to services during periods of restricted travel, the UK Government agreed that it was necessary to continue enabling and funding access to these services in England and Wales until the commissioning issue could be resolved politically. A central access point was established providing non-directed information and referral into the appropriate services available in NI and other parts of the UK. This was provided initially by Informing Choices NI, and later by BPAS.

152. Between April 2020 and the commencement of commissioned services from December 2022, a total of 4,568 abortion procedures were carried out across NI Trusts (a breakdown is not available, however the vast majority of these would be EMA procedures). The UK Government's published abortion statistics, [Exhibit **INQ000425634**], show that there were 371 abortions carried out in England and Wales for women resident in NI in 2020. In 2021 the number was 161. Figures for 2022 have not yet been published. I do not have information on how many women in NI travelled to England to access abortion services in the period between 23 March and the end of the first lockdown. Statistical information of this nature may be able to be provided by Information Analysis Directorate (IAD) in the Department or the policy team within Health Policy Group (HPG)

153. My professional concerns at the historic lack of a comprehensive local abortion service and the consequential risk to women have been well highlighted prior to the 2020 change in law. In 2016, I chaired an interdepartmental working group [Exhibit INQ000425635] which recommended to the then Ministers of Health and Justice a change in the law in relation to women who were diagnosed with a pregnancy with a fatal fetal abnormality, however with the fall of the Executive between 2017 and 2020 no progress was made until legislation was brought forward by the UK Government in the form of the 2020 Regulations. In January 2019, I gave evidence to the House of Commons Women and Equalities Committee in which I further referenced the need for an examination and a change in the law in NI with regard to fatal fetal abnormality, advising that "there is a compelling clinical consideration here as to whether or not the current situation with the law in NI is having a disproportionate impact on the health and wellbeing of women in Northern Ireland" and that "I think there is a legitimate question to be asked as to whether it is equitable, proportionate, to put in place a disproportionate resource in facilitating the women travelling outside of Northern Ireland to have a termination of pregnancy, separated from their families and friends and support networks, when in actual fact the issue that we are trying to address is a fundamental one of the law as it exists in Northern Ireland pertaining to termination of pregnancy."

153.1 Regarding the current provision of abortion services in NI, as referred to above, these services began to be formally commissioned in NI from December 2022. This was enabled through an instruction issued to the Department by the NI Secretary of State, under powers conferred on him by The Abortion (Northern Ireland) Regulations 2022, which included a requirement for the Department to ringfence the necessary funds to ensure services are fully implemented in line with the 2020 Regulations. Implementation by Trusts is overseen and closely monitored by the Department, in line with a comprehensive service specification which had been developed by the Department between June 2021 and January 2022, and which was subsequently agreed by the UK Government following the collapse of the Executive in February 2022. Acknowledging the need for lead-in times to enable service development, procurement, recruitment and training, the

implementation of these services is largely on course, and while further recruitment and training is required to increase service resilience, the vast majority of demand for abortion services in NI is now being met from within the NI HSC system. The requirement for women and girls to travel is England is limited to a very small number of medically necessary cases, and this should reduce further as the final phases of implementation are completed.

Domestic and Sexual Abuse

154. While I was not directly involved the Department participated in fortnightly PSNI-led teleconferences with other government departments and delivery partners in the voluntary and community sector to share statistics and ensure a joined-up approach as part of recovery planning. These teleconferences included the Department, Department of Justice, Department for Communities, PSNI, Women's Aid, Men's Advisory Project, Nexus NI, Domestic and Sexual Abuse Helpline, Northern Ireland Housing Executive, Victim Support Service, Rainbow, NSPCC, Northern Ireland Courts and Tribunal Service.

155. On 30 April 2020, the Department shared a 'Safety Planning by Phone During Covid-19' Presentation created by the South-Eastern Health and Social Care Trust with members of the Domestic and Sexual Abuse Stakeholder Assurance Group for voluntary and community groups to adapt when working with victims.

156. On 19 June 2020, the then Chief Social Work Officer wrote to the relevant Directors in the HSCB and HSCTs drawing attention to 'Guidance on Domestic Abuse', setting out the support services available for those at risk or suffering from domestic abuse. This Guidance, which was produced by the Department in partnership with the Department of Justice, was also aimed at those who may be concerned about someone else, such as a friend, family member or neighbour.

157. On 1 July 2020, the Department and the Department of Justice published the 'Guidance on Domestic Abuse' for the general public [Exhibit INQ000276440].

158. In response to the pandemic, on 19 June 2020, the Department, through the HSCB, over a three-month period provided funding of £60k to Women's Aid to provide an initial care package for families who were experiencing, or had been a victim of, domestic abuse. This package provided food parcels, home based resources and games for families, laptops for children currently without access and provision of mobile phones for mothers for the specific purpose of safety planning.

159. In November 2020, during the 16 Days of Action campaign, the Health Minister took part in a video message from all of the Executive Ministers which was released on social media asking victims to come forward to seek help and support.

160. The 'Ask for ANI' pharmacy code word scheme, launched by the UK Government, was also introduced in NI in January 2021 [Exhibit INQ000276441]. This was a new way for victims of domestic abuse who may be isolated at home to access support services. The scheme allowed those at risk or suffering from abuse to discreetly signal that they need help and access to support. By asking for 'ANI', a trained pharmacy worker could then offer a private space where they an assessment could be made if the victim needed to speak to the police or would like help to access the 24 hour Domestic and Sexual Abuse Helpline. Participating pharmacies had promotional material on display in store to signal that they are taking part. Local support organisations such as Women's Aid, Men's Advisory Project and the Domestic and Sexual Abuse Helpline which was provided by Nexus were involved in quality assuring training materials and participating in a Home Office Steering Group to inform the scheme's development.

161. In April 2021 the Department facilitated the display of Domestic and Sexual Abuse Helpline posters in each of the Covid-19 vaccination centres. Posters were also sent to a Belfast Health and Social Care Trust site where asylum seekers were being vaccinated. While I was aware of this work, I was not actively involved in providing professional advice.

162. During 2020 the Department commissioned the Institute of Public Health in Ireland (IPHI) to provide high level monitoring of the wider evidence base in relation to the impact of the pandemic, and the measures to address it, on indictors within the overarching public health strategy for Northern Ireland, Making Life Better. A report was produced in May 2021 [Exhibit INQ000276469] and focused on Physical activity and domestic violence [Exhibits INQ000276470 and INQ000276471].

163. At different stages of the pandemic, steps taken were intended to offer support and protection to other vulnerable groups including the learning disabled, vulnerable children, victims of domestic violence, cancer patients and patients on waiting lists. The detail of this is covered more fully in the Departments Corporate Witness Statement. The focus on this wider range of vulnerable groups reflected the Department's full range of responsibilities.

PROVISION OF INFORMATION, ADVICE AND ANALYSIS TO THE GOVERNMENT IN NORTHERN IRELAND AND IN PARTICULAR TO THE EXECUTIVE COMMITTEE

164. On 11th January 2020 the Northern Ireland Executive (Government) was reformed after almost exactly three years of being in abeyance. The Executive Committee was comprised of Ministers from five different political parties in a coalition as established under the D'Hondt system which applies to Northern Ireland.

165. Strategic decisions within Departments are made by the relevant Minister. However, in some instances decisions met criteria set down in the Ministerial Code [Exhibit INQ000262764] which requires individual Ministers to refer the decisions to the Executive for its consideration. The criteria for referral of Covid-19 related decisions to the Executive were routinely met during the Covid-19 pandemic. An example of Covid-19 healthcare related decisions that were referred to the Executive for its consideration included the example at paragraph 149-150 was the Departments paper to the Executive on 3 April 2020 seeking agreement to commission in NI a telemedicine Early Medical Abortion

service for the duration of the pandemic, similar to the service provided in England. The Department understood that the commissioning of any abortion services would require prior Executive agreement under the Ministerial Code. While discussed by the Executive on 6 April 2020, no agreement was reached on a way forward. A further paper resubmitting the proposal was sent to the Executive on 13 May 2020, and was not tabled for discussion thereafter. A further example of Covid-19 related health care decisions referred to the Executive was that of Cancer Services Rebuilding and Stabilisation Plans. The Executive committed the funding for this in September/October 2020. Another example Covid-19 related health care related decisions being referred to the Executive for decision was the pausing of shielding as described at paragraph 114. Similarly, all decisions on NPIs and the review of the regulations were considered and approved by the Executive throughout the pandemic.

166. This meant that, within weeks of its establishment, the Executive was required to make urgent policy decisions in the context of an outbreak of a novel virus and subsequent global pandemic with very significant health, societal and economic implications. There was significant uncertainty in the initial period of the pandemic given that a sufficient evidence base to inform policy decisions was not always available at key points in time. None of this made decision making straightforward, as the Executive, in addition to the health implications, had to consider the wider societal and economic consequences.

167. Although the Executive needed to consider all possible implications, my responsibility was to offer health advice from the health and well-being perspective of the population. As CMO, I was aware that the non-health related implications identified by other departments were not mutually exclusive of each other and were also not mutually exclusive from issues affecting the health and well-being of our population. For example, the health benefits of a good job and employment and the positive impact of economic growth in addressing poverty and improving wider population health are recognised. The Executive was advised about these wider, non-health related factors by the respective departments, sometimes with input or advice to those departments on the health considerations from the Department, the CSA and myself.

168. The CSA and I provided advice to:

i. The Department and the Health Minister;
ii. The First Minister (FM) and deputy First Minister (dFM);
iii. Other government departments, for example the Department of Education (DE), on a bilateral basis as and when required;
iv. Other Ministers and their Special Advisors (SpAds) as and when required; and
v. The Executive as a group.

169. This advice to Ministers in other departments and to the Executive was generally routed through the Health Private Office and/or agreed with the Health Minister. In providing my advice, my primary objective was to minimise the short to medium term health-related consequences, save lives by preventing severe disease and deaths, prevent the health and social care service from being overwhelmed and to ensure that people could receive the care they required. There was more uncertainty in terms of the potential long-term consequences of the reduction in access to health care and the wider health impacts of some of the NPIs. It was recognised from early in the outbreak that this was a highly transmissible respiratory virus and, while it was initially hoped that the outbreak might be contained and of limited duration, this rapidly proved not to be the case. The general approach that framed my advice is perhaps summed up best in the agreed initial UK coronavirus action plan published on 3rd March 2020 with the priorities being "contain, delay, research, mitigate" as outlined by the Health Minister in his statement of 19 March 2020 [Exhibit **INQ000203933**]. While I did not substantively contribute to the drafting of this action plan, I and my CMO colleagues across the UK discussed and were agreed on the general approach and we along with respective CSAs had an essential role in prioritising science and supporting the direction and coordination of research from the outset. The priority given to research and science was subsequently agreed in the coronavirus action plan in March 2020 with the priorities being "contain, delay, research, mitigated." It remains my professional view that this was a reasonable and proportionate plan given our understanding and knowledge at that time.

170. The advice I provided was based on the best available evidence at the time. It is a fact that the understanding of the virus, its transmission and the disease caused, took time to emerge. This was also true for the scientific, public health and clinical research undertaken to provide an understanding of these aspects, and to improve the information for policy decisions, including research to improve treatment and to develop medical countermeasures. This is considered more fully in the UK CMO Technical report, Chapters 1, pages 21 to 62 and Chapter 3, pages 107 to 119 [see Exhibit **INQ000203933**].

171. I considered information, evidence, expert consensus recommendations and advice from a wide range of sources in formulating and providing my professional advice to Ministers. This included consideration of the consensus views of Scientific Advisory Group for Emergencies ("SAGE") and its subgroups, and other U.K. expert advisory groups such as the New and Emerging Respiratory Virus Threats Advisory Group ("NERVTAG"). In addition, a Strategic Intelligence Group (SIG) was established in Northern Ireland and first met in April 2020 to consider emerging evidence and recommendations from SAGE and other sources in the specific context of the epidemic in Northern Ireland. My advice was informed by emerging evidence from presentations at the UK Senior Clinicians, the CSA, SIG and my consideration of numerous scientific papers and other papers.

CMO Group Structures and Support

172. As the principal healthcare professional advisor to the Health Minister and to other policy groups within the Department, I lead a small team of doctors that provide professional medical advice. This is comprised of myself, two DCMOs (Professor Lourda Geoghegan and Dr Naresh Chada) and at the time four Senior Medical Advisors, two of whom are part-time. Together we provide advice to policy areas across the Department including primary care, secondary care, workforce, mental health, elderly care, family and children's services. In instances where specific specialist advice is required which is outside the area of expertise of this team of medical advisors, my staff and I work to secure the necessary expert advice from outside the Department from HSC organisations,

academia and, if necessary, from outside Northern Ireland including sourcing advice from other specialist advisory groups. Both DCMOs have specific policy responsibilities within the CMOG alongside their role as professional advisors.

173. During the pandemic response the DCMOs provided advice and support to me as CMO. All resolved medical professional advice from CMOG to the Health Minister was provided through my office. Each DCMO also led on significant elements of the pandemic response reporting through me. For example, acting as the Senior Responsible Officer for the Covid-19 vaccination programme, chairing the Clinical Extremely Vulnerable People Groups which coordinated the provision of advice on shielding, Chairing the Care Home Task and Finish Group providing advice on testing to relevant policy colleagues, and establishing and Chair in the first instance the Nosocomial Cell which provided advice and support to Health Trusts in management hospital outbreaks of Covid-19.

174. The CMOG also includes the policy and professional responsibilities of the Chief Pharmaceutical Officer (CPO), the Chief Dental Officer (CDO), and Chief Environmental Health Officer (CEHO), all of whom report directly to me.

175. When the pandemic began, a substantial focus of the CPO and her team's time involved working with pharmacy and medicines' policy colleagues across the UK to ensure access to supplies of critical care medicines for the treatment of Covid-19 affected patients. In addition, actions were taken by the CPO to bolster community pharmacy services in Northern Ireland to maintain access to medicines, including home deliveries for vulnerable patients, and providing reliable access to the advice of pharmacists across the country. The implications of EU Exit plans on the availability of, and regulatory framework for, medicines for prescribing in Northern Ireland also resulted in significant work for the CPO and her team. The establishment of the EU Exit framework for medicines could not be set aside or delayed, and work on that continued throughout the pandemic and, indeed, led to strengthened supply chains which appeared to be advantageous during the pandemic.

175.1 The Covid-19 pandemic posed many new risks and challenges the UK had never faced before and some medicines required for the management of patients with Covid-19 came under considerable pressure during the first wave as suppliers struggled to keep up with international demand. This was particularly true of certain medicines used in critical care settings to support mechanical ventilation, end of life care, and antibiotics. As described at paragraphs 394-402, aside from the Covid-19 pandemic, problems can ordinarily arise in global medicines supply chains, for a variety of reasons including access to raw ingredients, manufacturing issues, batch failures and regulatory intervention if there are any concerns. Sometimes this leads to supply problems with medicines that require UK-wide management, as well as local collaboration across health and social care to mitigate the risks this affecting patient treatment and care. The Department of Health and Social Care (DHSC) Medicines Supply Team has overall responsibility for maintaining the continuity of medicines supply to the United Kingdom and leads on the identification and management of medicines shortages issues, working with the Department of Health in NI and the other UK administrations to ensure a coordinated approach to the management of medicines supply issues across the UK. Medicines manufacturers are legally required to provide information to the DHSC Medicines Supply Team about availability of UK licensed medicines and about discontinuation or anticipated supply shortages. These requirements ensure that the DHSC Medicines Supply Team have early relevant information to help manage supply shortages and mitigate any potential impacts on patients. While full details of the specific reasons for all medicines shortages and why efforts to maintain supply have failed are not routinely shared with the devolved administrations, DHSC may share information about high impact shortages where necessary to facilitate a UK-wide approach to management. Further information is provided at paragraphs 402-403.

176. The policy responsibilities of the CPO and CDO encompassed the role of community pharmacy and the delivery of primary care dentistry during the pandemic and required them to work closely with their pharmacy and dental counterparts in the Health and Social Care Board (HSCB). In April 2022, the

functions of the HSCB were transferred to the Department. Those functions now reside within the Strategic Planning and Performance Group (SPPG) in the Department. Dental services were particularly affected during the pandemic given the proximity to the patient and the high level of aerosols generated through routine dental procedures. The CDO worked closely with counterparts across the UK to balance risks for oral health personnel in line with cross-infection guidance while securing patient access to essential services, particularly in the first three months of the pandemic response.

177. Because of the work associated with the pandemic, the Chief Environmental Health Officer (CEHO) ceased all of his usual policy and professional responsibilities for a period of approximately 2 years from February 2020 until March 2022. His role during the pandemic included supporting work associated with the EOC and leading work on the development of the necessary Covid-19 related legislation, as well as regular reviews of and revisions to this legislation.

178. The CSA, Professor Ian Young, is also within the CMOG and he reports directly to me alongside both DCMOs. He provided key leadership and support during the pandemic. His role in the Department is a part time one (equivalent to three days per week although this increased by necessity to the equivalent of full time during the pandemic) and has three main aspects:

i. Chief Scientific Advisor – this involves providing scientific advice as required in the Department, and it was in this capacity that he was mainly acting during Covid-19;
ii. Director of Research and Development for HSC bodies in Northern Ireland with overall responsibility for issues related to Research (including funding) in the HSC system; and
iii. Head of Profession for the Healthcare Science workforce in the HSC system (Chief Scientific Officer), a role similar to that of other Heads of Profession (CMO, CNO, CPO, CSWO, Chief Allied Health Professional Officer represented the allied professional groups, including for example physiotherapists, occupational health therapists and dieticians).

179. While the demands right across the Department were significant, there were particular demands on the CMOG during the pandemic and as described at paragraph 12 on professional medical, scientific and public health advice. This was particularly so in relation to the need to develop and adapt policy, prepare new legislation and to respond to extensive demands for advice to other policy and professional colleagues within the Department, as well as to other government departments and their agencies. To help meet this demand, the Department, through my office, and with the agreement of the Permanent Secretary, secured a number of former and external staff with particular experience and expertise. These former and external staff worked within and on behalf of the Department to assist in providing advice, leading projects and providing support as required and reported to me as CMO. These individuals included former DCMOs Dr Paddy Woods and Dr Elizabeth Mitchell, former Department Senior Medical Officer Dr Margaret Boyle and a Consultant in Public Health, Dr Joanne McClean, on secondment from the PHA. At my request, Dr Patricia Donnelly, a former senior staff member within the Belfast Trust, led several pieces of significant work within and on behalf of the Department. For example, Dr Mitchell carried out a review of the contact tracing service [Exhibit INQ000137388] and was then seconded into the PHA, with the agreement of the CEO and myself, as the Director of the Contact Tracing Service. Dr Donnelly, at my request, reviewed the initial surge plans for intensive care and the care home sector. Later, she and Dr Margaret Boyle worked with Departmental professional and policy colleagues, the PHA and the wider HSC in the operational delivery of the Covid-19 vaccination programme. Chief Professional colleagues including the then Chief Nursing Officer, Professor Charlotte McArdle, the then Chief Social Work Officer, Mr. Sean Holland and their respective professional and policy teams provided leadership on key elements of the pandemic response including leading the subject special policy cells in the first wave. Within the CMOG, reporting to me, the CSA (Professor Ian Young), the CPO (Professor Cathy Harrison), the CDO (interim, Mr. Michael Donaldson, later replaced substantively by Ms. Caroline Lappin) and the Director of Population Health Directorate (Liz Redmond) and her team also provided significant leadership on respective aspects of the response to the pandemic. This was in addition to the support and leadership of the then Deputy Secretary in Health Care Policy Group, Mr. Jackie

Johnston, and his policy team, and the significant role played by the Department's Information Office.

180. From January 2020 onwards, my role and responsibilities and those of colleagues significantly changed and a dynamic approach was taken to Departmental structures as they were adapted to meet the challenges of the pandemic as these evolved. This involved the roles of individual staff, including Chief Professional Officers, teams and Directorates being repurposed to focus on aspects of the Department's response to Covid-19. In addition to the existing Population Health Directorate and the Quality, Safety and Improvement Directorate (both of which have changed significantly in shape and nature since the pandemic commenced). As described at paragraph 38 I established a Covid-19 Response Directorate within CMOG in October 2020 in response to the continuing work demands placed on the Group. A number of the staff in this new Directorate had already been supporting the response to Covid-19 from early March 2020 onwards as part of a departmental resource realignment. The following year, in June 2021, I established a Covid-19 Strategy Directorate. The primary role of the Covid-19 Response Directorate was to oversee policy in relation to Testing and Contact Tracing. The role of the Covid-19 Strategy Directorate was to oversee a range of new evolving responsibilities including Waste Water (WW) Surveillance, coordination of the relationship with the then soon to be established United Kingdom Health Security Agency (UKHSA); support for the International Travel Programme; and a refresh of the Testing Strategy (the latter was not published as it was overtaken by events). It is perhaps relevant to note here that the Interim Protocol for Testing for Covid-19, which supported the Testing Strategy, was reviewed, updated and communicated a number of times by the Department.

Departmental Structure

181. At all times, of necessity we had to adopt a flexible and adaptive approach within the Department and across the HSC and modified and changed the arrangements to make most effective use of resource, skills and experience. I believe this flexibility and agility was particularly effective as the Department

moved from the emergency response phase of the pandemic into a more business continuity approach given the sustained nature of the response required. In my view there is no ideal departmental organisational structure particularly given the unprecedented demands of the pandemic. What is most important is highly effective and functional intra and interdepartmental working and efficient and effective cross department relationships, matrix working between professional and policy teams with the flexibility and scalability that ensures that resources can be appropriately aligned to plan and prepare for future pandemics. We had finite capacity in the Department and therefore I identified very early in the pandemic that we had to make most effective use of extant skills and experience across the system, which was augmented by the input and support of previously retired colleagues for which I am extremely grateful. The wider Northern Ireland Civil Service (NICS) in preparing and planning for future pandemics should consider more agile and responsive arrangements for the redeployment of staff to support departments which may be significantly impacted. It is also important that consideration is given to having specialist and generic skills and training in emergency preparedness and planning across all departments. Ultimately, my team and I, as well as colleagues across the Department, sought to ensure decisions were as informed as they could be and that all aspects of the response were managed and coordinated. From the Department's perspective, these arrangements ensured appropriate leadership, alignment with policy, and provided necessary oversight and governance. As with all public health bodies and agencies, the PHA in NI faced significant challenges during the pandemic given the intensity of the response required and its duration. As CMO while I can inform and advise, I do not have responsibility for prioritisation and resourcing decisions which are set by the Permanent Secretary, the Minister and ultimately for all Departments by the Executives decision on resource allocation. In my view the Department and the PHA had by far and away significantly less resource available to it, as compared to other jurisdictions with similar policy and legislative responsibilities. These responsibilities were both by direct Departmental action and through its ALBs included developing appropriate policies; determining priorities; securing and allocating resources; setting standards and guidelines; securing the commissioning of relevant programmes and initiatives; monitoring and holding to

account ALBs and promoting a whole system approach. These existing accountability arrangements of ALBs remained extant throughout the pandemic. It is my view that while the constraints on resources considerably added to the pressures across the Department, PHA and HSCB, and particularly on a small number of key individuals and teams within the Department. It is my view that: the highly effective professional and interpersonal relationship and effective collective team working; joint endeavour in the greater public good with significant innovation and agility across the Department, its ALBs and the entire health and social care system within a relatively small health and social care system compensated for these constraints to a large extent. By way of example the PHA leadership team, CMO Group and I worked very closely to provide mutual support and assistance to ensure the most effective arrangements to meet emerging and evolving challenges and the many demands faced. This collaboration and collective endeavour was facilitated by the establishment of a number of oversight boards which I Chaired. A number of the more operational and expert public health advisory groups such as the Expert Advisory Group on Testing (EAG-T) were led at Director level within the PHA acting on behalf of the Department. This later group was established at my request and considered and developed recommendations to the Department on all aspects of Covid-19 testing, including the testing of healthcare workers and community testing. The advice on testing in all settings was kept under continuous review and was incorporated into revisions and updates to the Department's Interim Protocol for Testing (IPT) for Covid-19 which was an operational tool providing information on eligibility for testing and advice on how to access testing. I have provided further information on the role of the EAG-T and the IPTs in the section "Testing for Healthcare Workers and the role of the Chief Medical Officers Group" response below.

Engagement with Expert Advisory Groups and Bodies

182. The advice I provided throughout the pandemic was based on the most current available evidence at the time. It is a fact that the understanding of the virus, its transmission and the disease caused took time to emerge as did the scientific, public health and clinical research undertaken to provide an understanding of

these aspects, and to improve the information for policy decisions including research to improve treatment and to develop medical countermeasures. This is considered more fully in the UK CMO Technical report, Chapters 1, pages 21 to 62 and Chapter 3, pages 107 to 119 [see Exhibit **INQ000203933**].

183. During the pandemic, our advice to Ministers benefitted from UK international liaison with other countries, and the rapid dissemination of emerging findings including those findings from scientific papers. As described above, we also benefitted from representation on, and expert advice received from, UK groups and in particular SAGE, its subgroups and NERVTAG. I regularly attended meetings of the 4 UK CMOs, which met several times a week in the early stages of the pandemic, and the UK Senior Clinicians Group, which met regularly between March 2020 and March 2022 and both groups were also attended regularly by DCMOs. These steps (and those discussed below in this section) helped me to ensure that the information used when formulating advice was as accurate and reliable as possible in the circumstances.

184. The UK Senior Clinicians Group provided a forum for discussion and the sharing of papers and research from within the UK and around the globe touching on almost every conceivable aspect of our response to Covid-19 including provision of critical care, PPE, Guidance, Care Homes, Testing and Tracing, periods of infectiousness, isolation periods etc.

185. We had access to data and presentations at UK Senior Clinicians and the opportunity to share and discuss issues at UKCMO meetings. All these groups and meetings involved the sharing of emerging intelligence on the characteristics of the virus, how transmissible it was, and its clinical severity. This was particularly relevant with the emergence of new variants. We also had access to evidence on the effectiveness of NPIs and behavioural interventions etc. Such cooperation, informed by discussions with the CSA and DCMOs, informed my advice to the Health Minister and consequently to the Executive in Northern Ireland.

186. In formulating advice, due regard was also given to the experience and intelligence emerging from other jurisdictions which was factored into Northern Ireland specific advice. This was highly relevant as, at various points in time, other jurisdictions were either ahead or behind Northern Ireland in relation to disease trajectory and its impact, and the experience of new variants.

187. Research to develop scientific and public health evidence to inform policy and clinical practice was crucial in the early stage and throughout the pandemic response. This is considered more fully in Chapter 3 of the UK CMO Technical Report [see Exhibit **INQ000203933**]. During the pandemic, one of the main sources of evidence in the UK was provided by SAGE. The advice and evidence provided by SAGE was developed by assessing and reviewing evidence from multiple different centres of expertise and taking account of the views of a wide range of nationally and internationally recognised experts. SAGE is not a forum which any of the Devolved Administrations has the capacity to fully replicate, nor would it be scientifically or technically feasible nor operationally warranted to duplicate their work.

188. I am not a member of SAGE although the CSA represented Northern Ireland (NI) in this capacity and his Deputy and others attended SAGE meetings as participants or observers. As CMO, I had access to and considered relevant SAGE papers, consensus views and minutes. Northern Ireland was also represented in a number of SAGE subgroups. Over the course of the pandemic, I chaired, or attended a number of key groups or had access to expert views and recommendations along with a wide range of other scientific evidence and papers. I was assisted in my consideration of these by the CSA and the DCMOs. All of this contributed to the formulation of my advice to the Health Minister. Many of these other groups also considered research evidence and expert opinion from a wide variety of sources across the UK and internationally. I believe in the future there would be significant benefit that when SAGE is activated that NI, and the devolved administrations are fully represented from the outset in any future health emergency by the full membership of the CSA representing the Department and in addition the CMO.

189. I agreed a proposal by the CSA to establish a group in Northern Ireland specifically to focus on scientific evidence and its application/ relevance in the specific circumstances of Northern Ireland, taking account of epidemiology and wide societal/ cultural factors. It was my view and that of the CSA that this group was important in informing the provision of resolved scientific advice in NI to the Minister and the Executive. Scientific advice took account of a wide range ofe research findings and recommendations of expert advisory groups, reports and evolving evidence, as well as discussions at the Strategic Intelligence Group (SIG), and it is therefore very difficult to provide specific examples of advice solely attributable to the group. This group first met in April 2020 and was titled the Strategic Intelligence Group (SIG) [Exhibit INQ000103642]. SIG was chaired by the CSA and I attended its meetings. SIG considered a wide range of scientific papers throughout the course of the pandemic, including those developed by SAGE and provided advice to the CSA and myself. The specific role of the group was to consider the scientific and technical concepts and processes that are key to understanding the evolving Covid-19 situation, potential impacts in Northern Ireland, and the approaches to mitigating these. SIG's role was to apply the advice coming to the four nations from SAGE and other appropriate sources of evidence and information, including from the Republic of Ireland, and use it to inform the CMO and the Health Minister to aid with decision making in Northern Ireland during the pandemic. The membership of SIG included representation from Queen's University Belfast, Ulster University, Cambridge University, the PHA and the Department, allowing evidence to be broadly considered from a NI perspective. The advice of SIG informed the advice that I and the CSA provided to the Minister throughout the pandemic, for example in relation to consideration of the options for NPI measures in November 2020.

190. We were also represented at NERVTAG level by Professor Stuart Elborn, QUB, who attended in the capacity of observer, although I understand that he did sometimes ask questions or participate in discussion. NERVTAG is an expert committee of the Department of Health and Social Care (DHSC), with the CSA also attending on occasions. NERVTAG advises the CMO and, through the CMO, Ministers, DHSC and other government departments, providing scientific

risk assessment and mitigation advice on the threat posed by new and emerging respiratory viruses and on options for their management. This, along with other scientific information, informed advice to the Health Minister. I received regular weekly in person updates from the Department representatives at NERVTAG and in addition I had full access to the minutes of meeting which included for example NERVTAG's consideration of the potential impact of new variants of Covid-19. In my experience the advice received from NERVTAG and the arrangements for communication of that advice to myself as CMO in NI were effective. Given my other considerable commitments during the pandemic, there were limitations on my ability to attend the many meetings of expert advisory groups given the size of my team. It is my view that the representation during the pandemic was appropriate and allowed for a full understanding of the extent of the discussions, including any variance in points of view discussed at NERVTAG.

191. Guidance introduced by Public Health England (PHE) [Exhibit INQ000257936] and developed by expert working groups was regularly reviewed by the IPC Cell chaired by the Director of Nursing in the PHA as to its suitability for Northern Ireland, and then adapted for Northern Ireland [Exhibit INQ000408137] and implemented. While I was not directly involved given that this guidance was informed by the extant evidence as far as I understand there were no differences as to how this was applied in NI although those responsible for the IPC Cell in the PHA will be better placed to advice. An example of this advice included the resolved expert advice which was provided by the UK 4-Nations IPC Cell to each of the nations. This guidance was assessed locally in NI with a view to adopting and or advising regarding its appropriateness for implementation here. Northern Ireland's local IPC Cell provided a forum for discussion of key issues, and development of appropriate IPC guidance, arrangements, and policies to apply across the region. The local IPC cell was represented in the UK 4-Nations IPC Cell by a senior IPC practitioner who was a Registered Nurse and this allowed the continuance of NI input to the shaping and influencing of expert advice and guidance. A further example of NI's involvement in all of this work was my nomination of an NI expert representative on the UK working group to review and advice on aerosol generating procedures.

192. As indicated at paragraphs 448 - 453, as CMO, along with DCMO colleagues and the CNO, I received and considered updates on proposed revisions or planned reviews being undertaken by the National IPC Cell at the UK Senior Clinicians meeting. I provided my professional advice as CMO to inform the overall approach recognising the specialist nature of the advice and guidance. Any reviews or changes to the extant guidance were based on a critical expert appraisal of any new evidence and also involved discussion and consultation with professionals and their representative bodies. With the roll out of the vaccination programme and greater levels of population immunity, it was essential to ensure that the risk of infection and outbreaks in healthcare settings was balanced with the need to access health services while ensuring proportionate infection prevention control measures were in place to protect patients and staff. It was recognised that the combination of behavioural change in health seeking behaviour by the public and changes in access to services was in of itself creating potential harm in terms of delays in treatment and care, which could potentially impact on outcomes.

Changes in Health Seeking Behaviour and delays in seeking care

193. As the response to the pandemic became extended beyond the first wave there were growing concerns from health professionals and professional organisations that people were avoiding seeking health care when it was in fact appropriate and necessary to seek health care. As described more fully at paragraph 196, the Health Minister and the Department issued public statements to make clear that the health service was still providing treatment and care and recommended that people should not delay seeking care and advice. While both elective throughput and Emergency Department attendances did reduce throughout the pandemic, this reduction was likely due to several factors. These factors included the need for social distancing within health and social care facilities for IPC reasons, the fact that a number of people who would otherwise be using services were shielding and the impact of general advice to control infection with Covid-19 on both staff and patients. It is difficult to ascertain what specific impact the public messaging to “stay at home” (or similar messaging) may have had on patients who were in need of treatment, but who delayed seeking care.

194. The following statistics are illustrative of the basis of the general concerns:

- Emergency Departments attendances decreased by 26.2% (219,719) from 839,706 in 2019/20 to 619,987 in 2020/21 during the period of the Covid pandemic. Data published by Information Analysis Directorate (IAD) in the Department in August 2021 [Exhibit INQ000408138];
- the routine monitoring by the HSCB of hospital referral activity showed a 28% decrease in GP referrals to Consultant-led Outpatient services between 2019/20 and 2020/21 from 395,372 to 282,094; and
- interim evidence collated by IAD in December 2020 and published [Exhibit INQ000408139] related the impact of the pandemic, with increases in Elective waits.

195. Furthermore, additional information was available from the (Northern Ireland Statistics and Research Agency (NISRA) Coronavirus (Covid-19) Opinion Survey which ran from April 2020 through to March 2022 and was designed to measure how the Coronavirus (Covid-19) pandemic was affecting peoples' lives and behaviour in Northern Ireland. The NISRA Coronavirus (Covid-19) Opinion Survey questionnaire was based on a similar survey that was being conducted by the Office for National Statistics (ONS) in Great Britain. Various phases of the survey were carried out and covered different topics relating to the pandemic. In phase 6 of the survey, a module was asked on "Access to Medical Care" which covered questions including whether people were able to receive the same level of medical care for any long-term mental or physical health condition, problem or illness that they had been receiving before the outbreak of the pandemic. It also included questions relating to the perceptions of people at that time using different healthcare services. Results from phases 1 to 6 of the survey which include the Access to Medical Care section can be found at NISRA Coronavirus (Covid-19) Opinion Survey Key Findings – Phases 1 to 6 [Exhibit INQ000272476].

196. Recognising the changes in public behaviour and access to care, the Health Minister and Department issued public statements advising that the health

service was still there for the public when needed and not to delay seeking care and advice although I am unable to assess how effective such communications were. It was undoubtedly the case that health seeking behaviour changed significantly during the pandemic because of people not wishing to overly burden the health service given the pressures of the pandemic, possible fear of infection, and also restricted access to services. General Practitioners wanted to ensure that anyone with a health concern was reassured that they would be able to get an appointment and see a General Practitioner, if necessary, and that if a person had symptoms, an unexplained illness or any reason to be concerned, they should in the first instance contact their General Practitioner. In September 2020, General Practice leaders in the then Health and Social Care Board, the Royal College of General Practitioners (RCGP) and the British Medical Association's (BMA) Northern Ireland General Practitioners Committee issued a joint statement reassuring patients that General Practice surgeries remained open but that patients may be being seen in a different way, including via phone or video, but that those who needed to be seen in person would be. They also wrote to Northern Ireland's Members of Parliament, Members of the Legislative Assembly and District Councillors with a similar message – the letter to Members of the Legislative Assembly is provided [Exhibit INQ000374200].

196.1 This was a message that the Department sought to reinforce. On 1 December 2020, the Department published a 'General Practice Mythbuster' [Exhibit INQ000259560]. The statement noted that despite the challenges of infection control and social distancing measures, General Practices have maintained vital primary care services, adapting to meet the demands of delivering these during a pandemic, including video consultations and enhanced telephony capacity to make it easier for many patients to get in touch with their General Practitioner quickly with General Practices remaining committed to providing face-to-face care where this is needed. This is covered more fully in paragraphs 215 – 218. I would wish to recognise the professional leadership and innovation of General Practice in NI and their teams in continuing to provide care to their patients in the most difficult of circumstances throughout the pandemic.

196.2 As access to services increased, I identified that there was a particular need to focus on the support provided to Trusts in preventing outbreaks of Covid-19 in healthcare settings. As described in paragraph 37, I established a "Nosocomial (health associated infection) Cell" to provide specific advice and support to Trusts [Exhibit INQ000185385]. I have provided further information on the work of this Cell in the section "Structures - Covid-19" response below. This led to the development by the Department of a "Covid 19 nosocomial dashboard" which provided Trusts with close to real time access to data on Covid-19 infections that had arisen in hospital settings. This was used to support infection prevention and control and the management of outbreaks. Relevant IPC guidance and advice was updated once the Nosocomial Support Cell and dashboard to reflect the additional support arrangement and to ensure the necessary access to health and social services was balanced with appropriate and proportionate IPC guidance. All such guidance was kept under active review.

UK Collaboration

197. In the first wave of Covid-19 the levels of community transmission were higher in some parts of England than the rest of the UK. NI assessed its own position separately in line with the fact that consideration and decisions on NPI restrictions were for each UK nation to determine. Nevertheless, NI also liaised closely with the UK Government and the Devolved Administrations (through COBR and other Ministerial meetings) in order to coordinate decision making, when appropriate.

198. While the oversight and deployment of the vaccine in Northern Ireland was led within CMOG, the UK establishment of the Vaccine Taskforce was vital in the research, development, manufacturing, and procurement from a range of different suppliers. A National Institute for Health Research/United Kingdom Research and Innovation ("UKRI") rapid research call funded the work to develop the Oxford–AstraZeneca Covid 19 vaccine.

199. These arrangements involved frequent and regular engagement that continues to this day. Structurally these arrangements consisted of formal regular CMO Calls,

UK Senior Clinicians Meeting, Joint Biosecurity Centre (JBC) Technical Board, JBC Alert Level calls (JBC subsequently became part of UKHSA and these UK Alert Level meetings are referenced at paragraph 207 below) and a range of other meetings. It was agreed by the CMOs that that any one of us could ask for a meeting to be called at any time on any issue. We held a number of such ad hoc calls to consider emergent and urgent issues. These were often late into the evening, early morning or over weekends. One example of these ad hoc calls was the decision on 30 December 2020 to prioritise first doses of vaccine to ensure the protection of a greater number of the population across the UK. This took account of the high levels of community transmission at the time and the current available stock of vaccine. This decision was later reinforced by emerging evidence on improved immune response with a longer dose interval between first and second dose primary vaccination.

Collaboration with RoI

200. Prior to the pandemic there was close collaboration and cooperation between Public Health in Northern Ireland and the RoI operationally and on health issues ranging from public health policy to health service policy.

201. Based on my previous good working relations with the CMO in ROI, I was confident that we would be able to affect a high level of public health cooperation between the two jurisdictions in response to the pandemic. I contacted the CMO in the RoI in early January by phone to discuss the developing situation in China, to update him on preparation underway in NI, and to seek an update on actions in RoI. Collaboration with RoI was not only on a North/South basis. The RoI CMO joined UK CMO meetings at my request and with the agreement of CMO colleagues twice in March 2020 and in addition there was at least one trilateral meeting involving the CMO of the RoI, England and myself. There were regular Ministerial meetings on a North/South basis, frequently involving the FM and the dFM. These meetings were in addition to the North South Ministerial Council meetings. There were also detailed engagements around travel within the Common Travel Area (CTA) and international travel, given the challenges arising

around data sharing in respect of international travel and at times the differences in risk assessment at an individual country level.

202. I met regularly with the CMO for the RoI to share information on, for example, clusters in border areas and to support joint work between the Irish Health Services Executive (HSE), the PHA and both Departments. We kept each other informed of developments and discussed the respective approaches which might possibly be taken in each jurisdiction. We did this as we were very mindful of the importance of the general alignment and communication of public messaging, so that we could inform our respective Ministers who ultimately took the decisions on this. We shared early and emergent modelling data from respective jurisdictions, and data on the identification and emergence of new variants of the virus. Subject to the consideration and agreement of Ministers we also explored options for coordinating respective responses which most visibly took the form of joint statements urging the population on both sides of the Irish border to exercise restraint in their social contacts to prevent or reduce transmission of the virus. An example of this coordination relates to our integrated approach to addressing higher levels of transmission that we experienced in some border counties. In response to this we agreed that both the PHA and the Health Services Executive would formally meet regularly and share data and intelligence. The joint RoI and NI collaboration in relation to border issues was exemplified by the actions taken in October 2020 in response to a high level of infection in the border area of Donegal and Strabane and Derry City Council area, in effect treating taking a common epidemiological approach. At the request of both CMOs, respective public health agencies worked with local councils, the business community and wider civic society to ensure coordinated action to reduce community transmission; this included joint public messaging on media outlets.

203. As NI and ROI are two separate jurisdictions, my CMO counterpart and I provided advice separately to our respective Ministers. We jointly supported respective Ministers at relevant meetings and attended and provided updates to North South Ministerial meetings. We jointly contributed to the development of, and recommended to our respective departments and Ministers, a Memorandum

of Understanding on Public Health Cooperation on Covid-19 Response between Departments of Health, North and South, which was agreed on 7 April 2020 and areas of collaboration which are outlined below. These areas were discussed, and relevant information was shared, at our regular CMO meetings. While Ministers made the final policy decisions on a number of areas of cooperation and information sharing, all relevant areas would also have been routinely discussed at bilateral Ministerial meetings between the Health Minister in NI and his counterpart in the RoI. There was routine sharing of information between NI and RoI, including:

- Work on the border areas;
- Sharing data and research;
- Sharing of learning from vaccine deployment in NI;
- Sharing of information on the approach to care homes;
- Regular sharing of respective epidemiology situation; and
- Agreement regarding mutual aid in respect of Intensive Care, and health service capacity

204. Following a request by the Health Minister and discussions between both CMOs, the Institute of Public Health in Ireland (IPHI) were asked to prepare and coordinate a Rapid Review assessment of the effectiveness and contribution of the NI/RoI MOU to the strategic and operational response to the Covid-19 pandemic. This did not progress as agreement to the terms of reference was not provided by the RoI Department of Health.

205. The RoI and NI are separate jurisdictions, each with an elected Government and respective Ministers accountable for policy decisions in their own jurisdiction. The Government in the RoI had its own separate advisory structures and committees in addition to European expert advisory structures such as the European Centre for Disease Control. While there were some differences in interpretation of emergent science, data and emphasis, the advice was generally broadly consistent. At official level, historically and during the pandemic, there was very close cooperation and regular engagement and cooperation. In my experience the professional collaboration between my counterpart, myself,

respective teams and public agencies was effective and of significant benefit during the pandemic.

Collaboration With Other UK Chief Medical Officers

206. In each jurisdiction the CMO provides independent advice to their respective Ministers whilst working together on public health policy, generating evidence and independently advising respective Ministers as decision makers. CMOs provide collective leadership and guidance to the profession across the United Kingdom on a range of clinical and professional matters.

207. From January 2020 as the outbreak in China developed, all four UK CMOs came together to provide advice on the threat of the outbreak becoming a pandemic and we advised our respective Ministers and governments. Throughout the pandemic my DCMOs and I met regularly with our counterparts in Great Britain to exchange information, provide mutual advice and support. These 4 UK CMO meetings attended by respective CMOs and DCMOs took place approximately three times per week in 2020, and approximately two times a week in 2021 and early 2022. Furthermore, through the pandemic we met each week at a UK Alert Level meeting to review data on disease activity and potential growth. We also reviewed direct health service pressures in each jurisdiction to provide advice to the Secretary of State for Health, respective Health Ministers and governments on the UK Covid-19 Alert level based on analysis of data from across all jurisdictions provided by colleagues from the Joint Biosecurity Centre (JBC) before the establishment of the UK Health Security Agency (UKHSA) and subsequently as provided by the UKHSA. The 4 UK CMOs, including myself, also participated together in other UK wide groups and meetings, for example the UK Senior Clinicians Group. The DCMOs would also have attended these meetings.

208. During the pandemic response, the 4 UK CMOs, as requested by Ministers, worked together to provide joint advice to the UK Government and the Devolved Administrations on specific matters. An example of this collaboration was our letter and recommendations to the Secretary of State for Health and Health

Ministers on the universal vaccination of children and young people aged 12-15 years [Exhibit INQ000408141].

209. During this time, we issued a range of guidance and advice as the evidence about the virus developed and experience of the disease and its treatment evolved. By way of example, we issued joint statements and correspondence to the profession in relation to the importance of recruitment to UK wide Covid-19 therapeutic trials [Exhibit INQ000137309], the prioritisation of first doses of Covid-19 vaccination during the early phase of the vaccination programme [see Exhibit INQ000137310], and we provided assurances and support to frontline clinicians in recognition of the extraordinary pressures they were working under during the height of the health service pressures [see Exhibit INQ000137311]. Examples of the joint CMO letters to the medical and public health profession are attached at pages 378, Appendix A of the UK CMO Technical Report with examples of some joint key statements and public advice to Ministers at pages 379 [see Exhibit **INQ000203933**].

210. In my view, these arrangements were highly effective, facilitating professional engagement and discussion in what was a fast-moving highly complex environment. There was a great deal of uncertainty and in this context, professional judgement and advice needed to be considered and carefully constructed. Such arrangements allowed for professional constructive challenge, maximised the sharing of information and intelligence given the enormity of the issues and consequences. While there would have been informal discussions and communications, to the best of my knowledge and recollection, these did not include any significant consideration or formulation of agreed advice to respective Ministers from the CMOs that had not been already discussed and agreed at formal UKCMO meetings or was subsequently agreed at formal meetings and confirmed in written advice. On occasions, such communications would have been used to provide updates on options being considered by respective Ministers, for example on the need for further NPIs or the easing of certain restrictions or other policy considerations. This was in the context of the awareness of the importance of the alignment of public communications between

the jurisdictions insofar as this was possible and recognising that policy decisions had not been made and were for Ministers and respective administrations.

ROLES AND RESPONSIBILITIES OF DCMO IN NI

211. As the principal healthcare professional Advisor to the Health Minister and to other Policy Groups within the Department, I lead a small team of doctors that provides professional medical advice. This is comprised of myself, two Deputy Chief Medical Officers (DCMOs), Professor Lourda Geoghegan and Dr Naresh Chada and several Medical Advisors. Together we provide advice to policy areas across the Department including primary care, secondary care, workforce, mental health, elderly care, family and children's services. The Department policy leads for these areas sit in other Groups within the Department including, for example, the Groups led by the Deputy Secretary of Health Care Policy Group (HPG) and the Chief Social Work Officer respectively. In instances where specific specialist advice is required which is outside the area of expertise of this team of Medical Advisors, my staff and I work to secure the necessary expert advice from outside the Department from HSC organisations, academia and if necessary, from outside Northern Ireland including sourcing advice from other specialist advisory groups. Other professional leads in the Department operate in the same way, including providing their professional advice to policy areas within my Group. Both DCMOs have specific policy responsibilities within my Group alongside their role as Professional Advisors.

Healthcare provision and treatment of Covid-19

212. There was a need to balance the need for surge with service adjustment to meet pandemic needs, while maintaining an appropriate level of care and support for other health needs. This evolved over the course of the pandemic. As vaccines and Covid-19 treatments became available, the risk of severe disease associated with SARS-CoV-2 infection reduced, non-Covid-19 and non-urgent services were stepped back up. Between waves, routine non-urgent elective care was offered, while maintaining critical care surge capacity for further waves.

213. At the outset of the pandemic, when cases were rapidly rising it was not clear what or when the peak would be. Services were reprioritised to meet the surge in demand. Care for people without Covid-19, non-urgent care services, including elective operations and screening, were all significantly impacted. The public were also asked to avoid healthcare settings unless their care needs were urgent and necessary. At the same time arrangements were put in place to clinically assess people with symptoms of Covid-19 rather than them presenting in-person at healthcare settings.

214. Reprioritisation of services impacted demand differently across different areas of the health system. Primary care presentations, for example, reduced considerably in the first wave. At the same time, intensive care saw rapidly rising patient numbers which required the deployment of staff. Emergency admissions, urgent cancer treatment and other clinically urgent care was largely maintained. Hospital emergency admissions were significantly lower as healthcare-seeking behaviour of the public changed. I am aware that hospital emergency admissions were significantly lower, but I do not hold the statistical data in this respect. The detail of this information I believe can be appropriately provided by Information Analysis Directorate (IAD) within the Department. This reduction will have included some who needed urgent care but did not seek it, likely in part as they did not wish to put the health service under further pressure. It was recognised that advice to avoid unnecessary visits to healthcare could discourage appropriate and necessary presentations and early communications reiterated that urgent and necessary health services remained open and encouraged their use. However, there were reports particularly during the first wave of people avoiding health services to both reduce demand and to manage their own risk of infection with SARS-CoV-2. The Executive collectively considered and made decisions on NPIs. The primary purpose of the advice that I and the CSA provided to inform those decisions was to save lives and to prevent the health service being overwhelmed. It was largely the case that specific decisions on restructuring services, freeing capacity, and standing down services were made within the Department. The implications of these decisions on wider public health, waiting lists and waiting times were understood and were highlighted in papers submitted by the Department to the Executive. The negative

impact on other services was clearly described in press releases and Ministerial statements from the Department [Exhibit INQ000373432]. Regrettably, I do not believe there was any other way at the time in which it would have been possible to free the capacity necessary within the health service to respond to Covid-19 and to maintain other services. The alternative scenario of trying to maintain capacity across the entire health service, the health service being overwhelmed, and people being unable to access emergency care for other conditions, in my opinion would have resulted in not only more people dying from Covid-19 but also other acute conditions such as heart attacks and strokes. It was my observation that this is a point that Executive Ministers both knew and understood at the time. Several SAGE papers and the advice provided by the CSA and me to the Executive highlighted the negative impact on other aspects of health and the health system of decisions with respect to NPIs. While steps were taken to try and mitigate there were real practical limitations as to how effective these were. As I have described there were significant capacity issues in the health service and real concerns with respect to infection prevention control and the risks of transmission of the virus to otherwise well individuals some of whom may have had underlying health conditions and could become seriously ill. These concerns were repeatedly referenced in papers and my briefings to the Executive, and that there were extraordinary pressures that were being experienced in health and social care. Regrettably it simply in my view would not have been possible to keep elective care, screening services and care for people with severe Covid-19 all operating concurrently. At all times I have no doubt that the balance of risk and harm was carefully considered by HSC Trusts, the HSCB (now SPPG within the Department) and PHA and clinical teams prior to any proposal or decision with respect to pausing or to reduce routine services. These decisions weighed heavily on all, not least on those health care professionals and managers who were acutely aware of the potential consequences but also all in the HSCB, PHA, the Department and the Health Minister. In my view, given that the primary objective was to save lives and to prevent the health service being overwhelmed, it is only with benefit of hindsight that it could be suggested that choices existed when they didn't with respect to the measures that needed to be introduced and their implications.

215. While the rapid re-prioritisation of healthcare services enabled the health and social care system to continue to support Covid-19 patients, there was an ongoing need to balance this with other health needs that continued to require services. Shifting to remote consultations, discouraging unnecessary health setting presentations and asking that those with specific symptoms avoid healthcare settings unless necessary, was effective in reducing potential transmission and reduced health care pressures at a time of significant pressure. However, this must be balanced with a risk that health-seeking behaviours were adjusted to such a degree that there was significant unmet need, with resulting impacts on mortality and morbidity.

216. Advice discouraging presentation in healthcare settings when people had certain respiratory symptoms such as cough or breathlessness needed to be appropriately caveated. Without this, there was a risk that people with other conditions with a similar presentation to Covid-19 would be discouraged from accessing the healthcare they needed even though they did not present a threat of SARS-CoV-2 transmission. For example, people with a deterioration in an underlying respiratory condition such as chronic obstructive airways disease or asthma or breathless as a result of a deterioration in an underlying heart condition still needed to access medical care and attention. It was important that those people with urgent or immediate health care needs continued to access care, and this was emphasised in public communications at that time as described at paragraph 196 [Exhibits **INQ000469783** and **INQ000469784**.

217. The communication on discouraging unnecessary visits to healthcare needed to be continually adapted. Steps were taken to prepare the public for example following the first presumptive positive result for Covid-19 on the 27 February, members of the public who had symptoms and were concerned they had Covid-19 were asked not to attend hospital Emergency Departments or their General Practitioner rather to contact their General Practitioner or the out of hours General Practice service. A helpline was also established to provide advice, and this was further enhanced on 28 February when a dedicated Northern Ireland helpline was created with NHS 111 [Exhibit **INQ000371524**

CMOG, PHA and I liaised directly with NHS England in the initial establishment and testing of this. The Health Minister and I stressed repeatedly in public communications that emergency care was always open for business for those who required immediate and urgent care. Nevertheless, emergency presentation rates were much lower than normal during the first wave which was a cause of concern which we sought to address in communications at that time, adapting language to seek to emphasise that emergency care was open for business for those who required immediate and urgent care. Undoubtedly and regrettably some people who would and could have come forward did not, because of a sense of altruism or perceived risk of being in hospital.

218. Undoubtedly delays in people presenting for care and reductions in secondary prevention such as the prescribing of statins and antihypertensives, postponement of elective care and screening will have led to later and more severe presentation of non-Covid illness both during and after the first 3 waves. The combined effect of this will have contributed to a period of non-Covid excess mortality and morbidity even after the worst of the pandemic is over. Based on the Office for National Statistics (ONS) common UK-wide approach to producing national estimates of excess mortality, the years 2020 (1,490 excess deaths) and 2021 (1,574 excess deaths) had the highest level of excess deaths during the period 2011 to 2022. Male life expectancy decreased by 0.9 years from 79.0 years in 2019 to 78.1 years in 2021 and female life expectancy decreased by 0.8 years from 82.8 years in 2019 to 82.0 years in 2021. Further, in-depth analysis would be required to look at patterns in attendances of those with pre-existing and/ or chronic conditions to assess the excess mortality and morbidity caused by delays in people presenting for care and reductions in secondary prevention. However, the NI Cancer Registry (NICR) found an adverse impact of Covid-19 across the cancer patient pathway with 12.6% fewer cases, higher levels of emergency admissions and stage shift from early to more advance stage disease when comparing patients diagnosed during April – December 2020 to equivalent 2018-2019 periods [Exhibit **INQ000469785**. I explained publicly during the pandemic that in my view, a position shared by all CMOs, that deaths during the pandemic would occur for a number of reasons and the true excess mortality would only become clear sometime after the pandemic was over. This included

deaths directly from Covid-19, indirect deaths if health services were overwhelmed and people with treatable conditions such as heart attacks and strokes or those requiring emergency surgery couldn't access care or because intensive care units were full. Other deaths and harm would occur as a consequence of both the introduction of NPIs and measures introduced by the health service causing delays in less urgent surgery and other services such as mental health. Finally, the longer-term harms caused by loneliness, increased unemployment, lower educational achievement and increased deprivation on health outcomes and the health of the population given the established links between deprivation and chronic or premature ill-health. For example, during one of the regular press conferences with the Health Minister, on 14 October 2020, I made the following points, in response to reported calls from "doctors leaders" for tighter Covid-19 restrictions on the economy:

"…there are no easy solutions or simple answers to this, only a series of hard and very difficult choices, all of which have bad outcomes. Bad outcomes in terms of health – impact on health services – but also wider impacts on society and wider impacts on the economy."

"Now what's good for our health is good for the economy and what's good for the economy is good for our health. I've said many times standing here that socio-economic deprivation – unemployment, poverty – shortens and costs lives."

"And that's why these decisions made by the Executive are so very difficult because the Executive is seeking to balance all of those factors – the immediate pressures on our health service, to stop our health service and those working in it being overwhelmed, and the medium and longer term consequences on wider society, and on our mental health and well-being, on those people who have been shielding in the past, and on the wider economy. Because a good job is good for our health."

"And there are significant and fundamental risks in terms of young people and their long-term educational attainment and life opportunities which again I as Chief Medical Officer and I would urge all other doctors to be very mindful of.

Poverty kills people. It always has, it always will do. And it's those difficult decisions that the Executive has had to struggle with." **INQ000446233**

218.1 Similar points were made by the Chief Scientific Adviser and me in our advice to the Executive, as the minutes below illustrate:

"*The Chief Medical Officer and the Chief Scientific Adviser acknowledged the difficult decisions facing the Executive, and advised that it was more likely that they would be obliged to return to the Executive in mid-December to seek further interventions if easements were made to the current restrictions. The Chief Medical Officer advised of the prospect of excess deaths.*

"The Chief Medical Officer advised of his view that the COVID pandemic would lead to excess deaths no matter which approach was agreed by the Executive, but that the likely level of excess deaths would depend on decisions made by the Executive at this meeting; and on future actions; and that having some restrictions in place was preferable to allowing all current restrictions to fall. However, any reduction in restrictions may lead to a further intervention being required before Christmas. He recognised the difficult decisions required to balance short term COVID restrictions with longer term economic wellbeing.

"The Chief Scientific Adviser recognised the difficult choices facing the Executive as it sought to balance the need for health protection with economic difficulties resulting from COVID restrictions, advising that the nature of a pandemic is to cause deaths no matter what measures are put in place, but reiterating that anything leading to an increase in the R rate would have a short term and more visible impact. While the aim of "lockdowns' and other NPIs was to reduce the number of direct Covid-19 deaths and those also those deaths due to the health service being overwhelmed."

218.2 My advice however throughout the pandemic was clear, that there would be harm and indirect deaths caused by the very measures we were using to control the virus and its impact and that the more extensive and longer those measures were

in place the greater the harm would be. This is reflected in the content of the paper submitted by the Department to the Executive on 7 May 2020 [Exhibit **INQ000065566**], the second review of the Coronavirus recommendations, in which the Department provided an assessment of the wider impacts of the introduction of NPIs including: "*The impacts on health are also profound, from the stepping down of screening programmes and elective care procedures through to the long-term impacts on health from interrupted education, job loss and financial stress. There has been a sharp downturn in people presenting to GPs and emergency departments, including a significant decline in the number referred for cancer investigations and treatment. We are also seeing a sharp rise in all-cause mortality, not all of which can be attributed to COVID infection and disease. We also know that there is a very real relationship between the level of deprivation in our communities and health outcomes.*" The Department recommended to the Executive that proportionality be one of the guiding principles in assessing the continuing need for restrictions. The paper also explicitly described the likelihood of further waves of- the pandemic when restrictions were eased. The definition proposed for proportionality was: "*Proportionality. The detrimental impacts on health, society and the economy that can reasonably be attributed to the restriction or requirement should be tolerated only as long as the risks associated with withdrawal or modification are assessed to be more severe.*"

218.3 There was no easy way, and there were only ever difficult decisions for Ministers, and a very difficult path to walk between introducing measures late and not extensively enough resulting in a large wave and excess direct deaths or introducing measures too early and too extensively with excess indirect deaths and harms. Separately Ministers also needed to consider the wider societal, educational, and economic consequences.

219. Planning against a background of much uncertainty was challenging. It required plans, policy and guidance to be continually reviewed and updated as knowledge of the virus evolved, as additional capacity and capabilities were developed, and as revised modelling provided more refined indications of the parameters within which we were working and the likely pressures that might emerge. As chair of

Health Gold, I had responsibility for the coordination of all aspects of the planning and preparation for the surge response in the first wave within extant accountability arrangements and in keeping with the principles of subsidiarity. As such much of the operational planning was carried out by the commitment and effort of others in the first wave, with my seeking assurance as chair of Health Gold that planning and preparation was in place to respond to any surge in healthcare demands while maintaining normal services in so far as was possible. In due course with the transition from the Health Gold emergency response arrangements and with the establishment of Covid-19 Gold Command and the Rebuilding Management Board as described in paragraphs 34-35 the oversight of these arrangements changed as I focused on the coordination of the various elements of the public health response.

220. On 30 January 2020 following the recommendations of the Emergency Committee of the World Health Organisation (WHO), the Director General declared that the outbreak constituted a Public Health Emergency of International Concern. During late-January to early-March 2020 while the risk of the outbreak becoming a pandemic was assessed as moderate, based on the advice of the UK Chief Medical Officers, the Department commenced planning for the anticipated surge in demand for healthcare services arising from the outbreak. Alongside this, and for the same reason (namely planning for anticipated surge in demand due to the outbreak), I commissioned the Health and Social Care Board (HSCB) and the Public Health Agency to initiate surge planning for the health service in Northern Ireland. With respect to capacity and service preparation following a meeting with the senior leadership team of the HSCB and PHA on the 11 February 2020, I requested in writing [Exhibit INQ000137326] (on the 17 February 2020) that they develop integrated 'surge' plans setting out how health and social care would respond to any significant increase in Covid-19 cases. These plans were to cover community and primary care through to acute care, including those areas where it was anticipated there would be particular demands, such as critical care. Given that Covid-19 was transmitted by the respiratory route I also highlighted in the letter the need to ensure appropriate fit-testing of staff to ensure that they were protected when providing care and that the HSCB and PHA in their role as commissioners of services and role in Health

Silver should seek assurances from Trusts on this important aspect. I was also aware that "fit testing" was being raised by Health Silver with Health Gold.

221. The HSCB Chief Executive replied on 20 February 2020 [Exhibit INQ000130371] and advised that surge planning was underway and that the HSCB and PHA had established a regional operational Surge Planning Subgroup to ensure that there was an appropriate and proportionate level of HSC preparedness across the HSC in response to Covid-19.

222. On receipt of the plans, I commissioned further work to quality assure and address what I believed were gaps in the plans. I have sought but the Department has not as yet been able to locate the original plans received. The initial plans reflected to some extent the uncertainty around the potential health and social care pressures which made surge planning problematic. This additional work included the need for specific work and surge plans to be developed for critical care and secondary care. In my view this additional work that I commissioned as described at paragraph 225 in correspondence of 3 March 2020 with the subsequent establishment of a Covid-19 Strategic Surge Planning Directorate provided effective coordination and leadership to surge planning and addressed these gaps.

223. Working with those involved to support improvements in planning and monitoring, a team of assessors was tasked by myself with the support of my Departmental chief professional colleagues to undertake a review of the social care HSC Trust Covid-19 surge planning for the Independent Care Home Sector (nursing and residential care homes) and Trust directly managed inpatient and residential mental health and learning disabilities services (including supported living); and critical care and secondary care sectors. The gaps identified in each of the surge plans which were addressed to my knowledge sufficiently in advance to meet the anticipated surge requirements were as follows:

- Social Care – regional surge planning for the social care sector was initially based on a model of staff absence being the most significant risk factor for the continuation of services. A revised regional escalation plan set out 'a plan

on a page', for care homes, mental health and learning disability sectors, with in addition explicit expectations in respect of prevention, mitigation of risk, management of symptomatic patients and support for service continuity.

- Critical Care – the focus of this surge plan was based on a Nightingale hospital. However, there were some inconsistencies in the local escalation stages before stepping up to a regional Nightingale setting which were identified and addressed in the revised escalation plan.

- Secondary Care – each Trust had a plan at local level, however, testing of these identified how all Trust plans needed to connect at a regional level to ensure regional consistency. These secondary care plans also had to connect the total system of health and social care in NI, from critical care to community and Covid hubs, to protected non-Covid services and to ensure that pathways were in place to transfer individuals across the levels of care as required.

224. The work I commissioned in the care home sector, on completion, was, I understand, subsequently integrated into the initial plans which had been developed by the HSCB. For critical care, the output was incorporated into the HSC Summary Action Plan (March/ April 2020) which covered actions in some twenty-one health service areas informed by the reasonable worst case scenario planning data. While the plans were produced sufficiently in advance of the anticipated surge requirements it is undoubtedly the case that all sectors across health and social care came under significant and sustained pressure throughout the pandemic. As described in paragraph 222, the review of the initial health service surge plans also resulted in the establishment of a Covid-19 Strategic Surge Planning Directorate by the Deputy Secretary of Health Care Policy Group (HPG) in May 2020 to provide leadership to the Surge Policy Cell of the EOC reporting into the Strategic Cell. On 3 March 2020 the Deputy Secretary of Healthcare Policy Group sent an email to the HSCB's Director of Commissioning to inform her that I had asked him to oversee the Department's policy input and coordination to HSC surge planning covering workforce, primary and secondary care. The Deputy Secretary proposed that, as the HSCB Director of

Commissioning was leading on surge planning at Health Silver level, that it would be useful to have an early meeting to scope out and agree the lines of communication and arrangements for engagement.

225. I had also anticipated that it was likely that Health Gold would be leading the strategic policy response to the surge and giving direction to the regional coordination of the surge response. To facilitate enhanced strategic management of the surge, I asked the Deputy Secretary, responsible for the Department's Healthcare Policy Group, and the Chief Nursing Officer (CNO) to assist me with the coordination of the Department's policy input to surge planning for the health service. The Deputy Secretary (Healthcare Policy Group) established a Covid-19 Strategic Surge Planning Directorate to provide leadership to the Surge Policy Cell of the EOC and report into the Strategic Cell. The terms of reference for the Covid-19 Strategic Surge Planning Directorate are provided in [Exhibit INQ000325160]. This new Directorate was led by a dedicated Director. From this point the Chief Nursing Officer (CNO), Deputy Secretary (Healthcare Policy Group) and the Covid-19 Strategic Surge Planning Director and I worked together as a leadership group within the Strategic Cell to coordinate the Department's policy input to surge planning for the health service. This newly formed Directorate, Director and CNO worked closely with the HSCB Director of Commissioning to ensure that the development of the Department's policy was responsive to the evolving situation within HSC Trusts and fully informed by expert commissioning and professional advice provided by the HSCB and Public Health Agency. As CMO I provided ongoing professional advice and support as was necessary.

226. There followed intensive engagement between the Department, HSCB, the Public Health Agency and HSC Trusts including I understand, a surge planning workshop on 5 March 2020. The planning assumptions that informed this work where those then available to the HSC. These were if we failed to take action to slow down the transmission of the virus up to 80% of the Northern Ireland population will be infected during this epidemic. Up to half of these may occur in a period of three weeks centred around the peak. If social distancing and other

measures are implemented by the population, with a combined effect they could reduce the peak by some 50% and reduce deaths by up to a third. Planning assumptions also indicate that 8% of infected people will require hospitalisation, 0.7% will require critical care, and 1% may will die with the caveat that these figures were highly dependent on age and other health factors. It was also estimated that here may be 21% health and social care staff absence during the peak weeks of an unmitigated pandemic (without social distancing and other reduction measures being implemented). An absence level such as this required a flexible staffing policy involving current staffing levels to be augmented from areas of reduced activity, for example from theatres; some nursing care being delivered by non-ICU trained staff; and the normal nurse to patient ratios of 1:1 may be reduced". Given the absence of real data Covid-19 specific data at this time, these planning assumptions and estimates were high level and were provided at the population level in percentage terms to assist the HSCB and PHA in surge planning across health and social care. Colleagues in the HSCB and PHA will best able to advise how these planning assumptions were further utilised in their initial surge planning.

226.1 Papers and estimates presented at the 6th meeting of SAGE on 12 February prompted further work to consider the position in NI with respect to the requirement for health service assessment, hospital cases and critical care. Initial draft NI estimates were produced by a Senior Medical Officer (SMO) within [Exhibits INQ000425554, INQ000425553 and **INQ000425556**]. Where there were unknown elements of these estimates specific to Covid-19, Pandemic Flu reasonable worst-case assumptions were used and factored into Covid-19 current estimates, based on a 2016 population, again including confidence intervals where possible. The initial estimates produced by this SMO were:

- In Pandemic Flu reasonable worst case, based on a 2016 population in the UK some 9,840,000 would require assessment by health services. This is 30% of all those that are symptomatic. While it was then unknown for Covid-19, using pandemic flu planning assumptions it was estimated that this could result in approximately. 330,000 people in NI requiring assessment by health services (possibly over a period of 6 months)

- In a Pandemic Flu reasonable worst case, based on a 2016 population in the UK 1,312,000 would require hospital care, with an average six-day length of stay (LoS). This is 4% of all those that are symptomatic. While again this was unknown for Covid-19 it was estimated that this could possibly be in the region of 4% (1,312,000), as per pandemic flu planning assumptions. This would equate to approximately 44,000 people in NI requiring hospital care. Assuming all of these are inpatient cases with average LoS of 6 days this equates to a requirement for 264,000 bed days (over a period of potentially 6 months). For comparison in 2018/19 there were around 224,000 inpatient admissions to acute hospital beds (all ages) with an average LoS of 5.2 days giving around 1,165,000 occupied bed days in NI over 12 months. So the requirement would potentially be for around 40% of all acute hospital inpatient bed days but peak would be higher.

226.2 For Pandemic Flu reasonable worst case, based on a 2016 population in the UK it had been estimated that 328,000 would require the highest level of critical care (require intensive care for 10 days). This is 1% of all those that are symptomatic. While unknown for Covid-19 it was assumed this could possibly be about 1% as per pan flu planning assumptions. Based on this assumption approximately 11,000 people in NI would require the highest level of critical care (intensive care for 10 days) which is around 110,000 bed days again potentially over a period of 6 months. This was well in excess of the total critical care capacity. (Note: these 110,000 critical care bed days are probably included in the 264,000 acute hospital inpatient bed days referred to above.)

227. While I was not directly involved, the engagement described at paragraph 226 between the Department, HSCB, the PHA and HSC Trusts and the surge planning workshop on 5 March 2020 informed the planning assumptions then available to the HSC resulted in the publication on 19 March 2020 of the Health and Social Care (NI) Summary Covid-19 Plan for the period Mid-March to Mid-April 2020 [Exhibit INQ000103714]. The Plan summarised the key actions taken by the HSC from mid-March to mid-April 2020 to ensure that there was sufficient capacity within the system to meet the expected increase in demand

from patients with Covid-19 during this period. This was a dynamic plan, which was to be constantly refined given the emerging issues.

228. Sufficient healthcare capacity in terms of beds and in particular the availability of respiratory and ICU capacity to care for those requiring respiratory support and ventilation was a significant concern. On 1 March 2020 there were 88 critical care beds in Northern Ireland. There were a further 18 cardiac intensive care beds and 12 paediatric intensive care beds. On the 1 April 2020 from the information provided to me to assist the Inquiry, the number of general inpatient beds available in Northern Ireland consisted of some 1,996 general beds, of which 137 at that date were occupied by patients with Covid-19. Between late January and April 2020, the Health Service faced a rapidly evolving and uncertain environment. On 10 February 2020, I understand HSC Silver wrote to Trusts regarding managing patient flow at both containment and surge phases of the pandemic. This correspondence requested nominees from Trusts for each of the Continuity and Surge Planning Support Groups which were being convened, by Health Silver, to support a coordinated approach to strengthen HSC capability to respond to the impact on health and social care of any surge associated with Covid-19.

229. While I was not directly involved given my other responsibilities, I was aware that several task and finish groups were established in anticipation of and to plan for capacity during surge. I understand that Trust Surge Plans and Self-assessment checklists informed the Covid-19 Regional Surge Planning Subgroup which was chaired by the HSCB Director of Commissioning. This Group incorporated members from HSCB, PHA, Trusts, NIBTS, NIAS and the Department. As part of its remit, as described above the Covid-19 Regional Surge Planning Subgroup held a regional workshop, on 5 March 2020. This resulted in a NI Regional HSCB Surge Plan as described at paragraph 227 which outlined the actions that needed to be taken to ensure that there was sufficient capacity within the system to meet the expected increase in demand.

230. I have been advised in the preparation of this statement that the Regional HSCB Surge Plan used some information provided by the Department's Covid-19

modelling group, although I understand there was subsequent additional specific operational modelling by Trusts and some further modelling commissioned by the HSCB that informed planning although I had no involvement in this.

231. In Wave 1, the Department's modelling group, which I had requested to be established, updated modelling on a regular basis from the end of March 2020, including a range of estimates for inpatient and critical care numbers under different scenarios. This information informed Trust specific planning in relation to the surge which was led by HSCB via its resource modelling group. While NI had full access to UK wide modelling groups work on the potential impact of the pandemic, I anticipated that NI modelling would be, in all likelihood, timelier and more specific in describing a range of potential future scenarios and the likely calls on resources such as critical care beds and oxygen supply. To assist the HSC with the planning for a potential surge in demand for clinical care and the potential need for critical care beds, oxygen, Continuous Positive Pressure Airways (CPAP) machines and ventilators, on 1 April I circulated the Department's Covid-19 modelling scenarios [Exhibit INQ000137356]. The best case scenario suggested that, at the peak during wave 1, which would occur at week 9-10 (likely 6-20 April 2020), the peak number of Covid-19 patients requiring ventilation and critical care beds during the first wave would be 80; peak numbers of Covid-19 patients requiring oxygen in the first wave of the epidemic 170; peak number of Covid-19 hospital admissions during the first wave of the epidemic (per week) 220. It also suggested that the cumulative number of Covid-19 deaths in the first 20 weeks of the epidemic would be 251. The modelling group did not consider this a realistic scenario. The worst-case scenario for the same period suggested that the peak number of Covid-19 patients requiring ventilation and critical care beds during the first wave would be 500-1,000; peak numbers of Covid-19 patients requiring oxygen in the first wave of the epidemic 1,150-2,000; peak number of Covid-19 hospital admissions during the first wave of the epidemic (per week) 1,800. It also suggested that the cumulative number of Covid-19 deaths in the first 20 weeks of the epidemic would be up to 14,000. Again, the modelling group did not consider this a realistic scenario. The reasonable worst-case scenario for the same period suggested that the peak number of Covid-19 patients requiring ventilation and

critical care beds during the first wave would be 180; peak numbers of Covid-19 patients requiring oxygen in the first wave of the epidemic 400; peak number of Covid-19 hospital admissions during the first wave of the epidemic (per week) 500. It also suggested that the cumulative number of Covid-19 deaths in the first 20 weeks of the epidemic would be 3000. I provided a further update to the Trust Chief Executives on 8 April 2020 [Exhibit INQ000408196] following a review of the latest observed data, peak modelling, and likely Covid-19 trajectory by the Modelling Group on the 7 April 2020 [Exhibit INQ000422518]. This meeting of the group had agreed amendments to some of the outputs in the reasonable worst-case scenario having considered the latest data which suggested that the social distancing measures that had been introduced were beginning to take effect in reducing the spread of the virus. The communication made clear that the modelling was particularly sensitive to assumptions based on emerging data and was expected to change over time. The letter indicated that the modelling group now expected that the Wave 1 peak would be less severe than expected in the previous week although again emphasised that the modelling was not a prediction or forecast, rather it was an indication of potential scenarios for planning purposes. It advised that the key scenario considered by the modelling group for planning purposes was the reasonable worst-case scenario, which on the balance of probabilities indicated an upper limit for patient flows in Wave 1, including critical care requirements and deaths. In summary, this communication and update suggested that at the peak during Wave 1, which was likely to occur 6-20 April 2020, that the peak number of Covid-19 patients requiring ventilation and critical care beds during the first wave would be 140; peak numbers of Covid-19 patients requiring oxygen in the first wave of the epidemic 400; peak number of Covid-19 hospital admissions during the first wave of the epidemic (per week) 500. It also suggested that the cumulative number of Covid-19 deaths in the first 20 weeks of the epidemic would be 1500. The peak number of critical care beds and cumulative number of expected deaths were reduced compared with previous modelling based on the most recent observed data. The modelling group did not amend the peak number requiring oxygen or the peak number of Covid-19 hospital admissions as there was insufficient data available at that time to do so. In conclusion, the correspondence made clear that the modelling did not go beyond the first wave of the epidemic.

232. The correspondence also included updated Trust specific modelling breakdown, reflecting the revised reasonable worst-case scenario divided among the Trusts according to population of the relevant catchment area. It was emphasised that this modelling relied on a number of assumptions. These assumptions included: the course of the epidemic occurring equally across NI; no allowance was made for the possibility of clusters which might result in unequal demand; and no allowance was made for patient flows across Trust catchment area boundaries. All these factors had the potential to significantly alter demand.

233. During the period 1 March 2020 – 28 June 2022 the number of critical care beds fluctuated, largely in line with the Covid-19 waves. Surge Plans and De-escalation Plans were developed throughout the pandemic to enable the system to plan for surges of demand and to balance the need for critical care capacity required for Covid-19, urgent non-Covid and time critical surgical patients.

234. The first Covid-19 related admission to critical care in Northern Ireland was on the 15 March 2020. The First Wave Surge Plan was based on modelling information at 7 April 2020 and indicated a need for 140 Covid and 35 non-Covid critical care beds to treat people requiring critical care. The plan mapped the critical care bed need in Northern Ireland from 88 critical care beds at steady state through to 198 beds at high surge. This level of surge could be managed at local hospital level. However, when demand went over 198 beds it was determined that a Nightingale arrangement would be needed to manage up to 286 beds.

Intensive Care

235. The Critical Care Surge Plan to meet these recommendations was agreed by the Department on 16 April 2020 and was based on work that I had commissioned working closely with the CNO, the Director of Secondary Care and the in due course the Covid-19 Strategic Surge Planning Directorate which was led by a dedicated Director. The surge plan was two papers - a 'Surge Plan on a Page'

and a paper outlining the decision making of the 'The Surge Plan for Northern Ireland'. As Chair of Health Gold, considering the advice received, I would have approved and ratified this plan for consideration by the Health Minister.

236. I continued to provide professional advice and support to the Director of Surge Planning and the Deputy Secretary of HPG along with the CNO as part of a joint leadership team to inform the Critical Care Surge Plans. These initial plans and approach provided the basis for subsequent waves to ensure sufficient critical care capacity. My role involved providing advice and reviewing and critically appraising Critical Care Surge Plans with the Director of Surge Planning and the CNO, and engaging with colleagues in HSC Trusts, the Critical Care Network Northern Ireland (CCaNNI), the HSCB, PHA and other Departmental colleagues as CMO and Chair of the Strategic Cell. My objective was to work along with others to ensure sufficient critical beds capacity and the associated medical equipment required such as mechanical ventilators and CPAP machines including and other essential medical supplies such as oxygen and drugs required to support critically ill patients (paragraph 293 provides further information with respect to the basis of these concerns). I was not involved in the more direct operational aspects of clinical care for example I was not involved in, nor did I provide clinical advice regarding the use of pulse oximeters to monitor patients' oxygen saturation at home or in healthcare settings or that their accuracy may be affected by skin pigmentation. Paragraphs 371 – 375 provide a summary of my oversight of the work on oxygen supply and in supporting the work of the medicines Cell which was led by the CPO. Regularly updated modelling from the NI modelling group included a range of estimated for inpatient and critical care patient numbers under different scenarios and I understand this informed Trust specific planning in relation to the surge which was coordinated and led by the HSCB.

237. As described in paragraphs 228 and 264 concerns and challenges in ensuring all those who required respiratory support including intensive care received it, created significant concern moral distress for staff. There were significant concerns that intensive care capacity might not be sufficient to meet clinical need. This undoubtedly created significant psychological distress. This was a particular

concern given the challenges in transferring patients to other UK jurisdictions. These were concerns which I had raised with UK CMO colleagues, and which are described in paragraph 293. Recognising the very real concerns of clinicians I established the Covid-19 Ethics Forum which developed a Framework to support clinicians in clinical decision making during the pandemic period [Exhibit INQ000348826]. Following direct engagement with CCaNNI as described at paragraph 236, and following discussion with my counterpart within the RoI respective policy teams developed a mutual aid agreement in respect of intensive care capacity in the event of intensive care capacity being exceeded in either jurisdiction. As a consequence, all of this work I am not aware that there were any significant issues with oxygen supply or intensive care capacity being exceeded during the pandemic response. While the supply of medicines was at times challenging the plans put in place mitigated against the likelihood of critical medicines shortages. Similarly, while there was extreme pressure on critical care capacity the surge plans that had been developed and the extraordinary efforts of clinical teams prevented critical care capacity being overwhelmed although the pressures on teams was excessive physically and psychologically.

238. On 2 April 2020 the Department announced [INQ000103653] that the tower block at Belfast City Hospital would be designated as Northern Ireland's first Nightingale Hospital – a 230-bed regional facility for Covid-19 patients requiring intensive care during the anticipated surge period. This work was lead and coordinated by the Covid-19 Strategic Surge Planning Directorate as described at paragraph 225. This newly formed Directorate, Director and the CNO worked closely with the HSCB Director of Commissioning to ensure that the development of the Department's policy was responsive to the evolving situation within HSC Trusts and fully informed by expert commissioning and professional advice provided by the HSCB and Public Health Agency. The first stage of this subsequent decision was the options assessment of potential sites assisted by MOD input. As CMO I provided ongoing professional advice and support as was necessary.

239. The Department's first Covid-19 Surge Plan, published on 19 March 2020 [INQ000103714], had outlined how 'normal' capacity of 88 routinely

commissioned critical care beds across the Health and Social Care system (comprising a flexible complement of 56 Intensive Care Unit beds, and 32 high dependency or HDU beds) could be rapidly increased by a further 38 beds by taking the following steps:

- Utilising the facilities in cardiac surgery Intensive Care Unit at the Royal Victoria Hospital;
- Opening additional beds within the routine critical care locations, and
- By opening additional beds in recovery or theatre areas.

240. However, further to publication of the initial Surge Plan, and based on emerging UK modelling data from SAGE and other sources at that time, the CS A and I r, indicated that an increase in critical care capacity to this level was unlikely to be sufficient to cope with the potential level of critical care admissions under a reasonable worst case scenario. We primarily sourced scientific data and information from SAGE and NI data; however, in addition we drew upon a range of other sources of evidence, including from the World Health Organisation, European Centre for Disease Prevention and Control, The US Food and Drug Administration, and the wider scientific and grey literature.

241. The rationale for preparing to establish a Nightingale Hospital had been informed by this emerging scientific data, which led to revised Reasonable Worst-Case Scenario (RWCS) modelling for NI which, as advised to the Health Minister on 1 April 2020 (see below), suggested a level of admissions which would be in excess of that which could be provided by surging normal critical care capacity. Therefore, following the publication of the initial Covid-19 Surge Plan on 19 March 2020, the Department, in conjunction with Critical Care Network Northern Ireland (CCaNNI), Health and Social Care Board (HSCB), Public Health Agency (PHA), and Trusts began to develop a specific critical care surge plan to consider how critical care capacity could be further expanded. The Critical Care Network NI was a key partner, as clinician expertise and knowledge was accessed through this.

242. The output of this work was a draft Covid-19 Pandemic Critical Care Surge Plan, which the Health Minister was asked to approve through an urgent submission sent via email by the Director of Covid-19 Strategic Surge Planning on 1 April 2020 [Exhibits INQ000346769 and INQ000439817]. The submission advised of a Reasonable Worst Case Scenario requiring 180 critical care beds at the peak of the first wave, that immediate action was therefore needed to ramp up surge capacity in the Belfast City Hospital (BCH), and that up to 230 (or potentially 250) ventilated beds could be achieved by gradually folding all other Intensive Care Units into the Belfast City Hospital as pressures on capacity and staffing ramp up. Scientific information and Reasonable Worst Case Scenario modelling data were drawn down from the sources outlined above from March 2020 to support the submission issued to the Minister on 1 April.

243. The rationale for this phased approach had been based upon advice through regular engagement with clinicians from Critical Care Network Northern Ireland to surge planning leads within the Department and Health and Social Care Board, which explained that valuable staff resources were likely to be spread across multiple sites and that this would become impossible to sustain over an extreme surge period. Concentration of staff would allow expertise to be built up and shared rapidly while working in a larger team would provide additional support and guidance to staff working in a pressured environment.

Decision on a Site

244. In late March 2020, prior to the emergence of the Belfast City Hospital as the preferred location for a Nightingale facility, and informed by Reasonable Worst-Case Scenario modelling, the Department had initiated a rapid assessment of potential sites external to the Health and Social Care to provide additional critical care beds if needed. This involved site visits by senior officials of the Healthcare Policy Group and Strategic Surge Planning Directorate to the Titanic Exhibition Centre, Belfast Harbour Studios, and the Eikon Exhibition Centre at Balmoral Park, Maze, Co. Antrim, on 28 March 2020, supported by officials from Health Estates (at that point part of the Department of Finance, now integrated into the Department), a nursing adviser and the Military.

245. No formal assessment report was prepared; however, knowledge gained from the site visits fed into the proposal submitted to the Minister set out below. In parallel to the assessment of these external sites for a Nightingale Hospital facility, assessments of options for reconfiguring Health and Social Care hospital sites to increase critical care capacity were also underway.

245.1 It was following this assessment of potential external sites and discussions between senior officials of the Healthcare Policy Group and Strategic Surge Planning Directorate and the clinical lead of the Critical Care Network and the Chief Executive of the Belfast Trust, that the Belfast City Hospital tower block emerged as the preferred site for locating Northern Ireland's first Nightingale Hospital. The Department considered that, on balance, while the Eikon Exhibition Centre offered the optimum potential (in terms of capacity and accessibility) for a Nightingale Hospital facility on an external site, the Belfast City Hospital tower block could be more quickly adapted than the Eikon Centre. This factor swayed the decision in favour of the Belfast City Hospital tower block. Establishing this Nightingale facility would require significant temporary reconfiguration of existing critical care provision across the Health and Social Care hospital network. As CMO I supported the Director of Covid-19 Surge Planning and the Chief Nursing Officer with this work. The Department therefore obtained the agreement of the Chief Executives of the Health and Social Care Board, Public Health Agency and Health and Social Care Trusts for the approach being recommended to the Minister. This proposal aligned with the critical care reconfiguration work under way in rationalising existing ICU provision across hospital sites, as outlined above.

245.2 The Minister agreed the Department's recommendation to designate Belfast City Hospital's tower block as Northern Ireland's first Nightingale Hospital for the anticipated surge of Covid-19 patients requiring intensive care in the weeks ahead. This decision was announced on 2 April 2020 [Exhibit INQ000103653].

246. The Health Minister's decision to designate Belfast City Hospital Tower Block as Northern Ireland's Nightingale Hospital for the first wave was communicated to the

Belfast HSC Trust on the 3 April 2020. The Covid-19 Strategic Surge Directorate in the Department wrote to HSC Silver and advised that, to meet the critical care bed demand expected, a surge plan would need to be developed which would demonstrate some units down-turning critical care beds in order to create additional capacity on a large regional Nightingale at the Belfast City Hospital Tower Block.

247. HSC Silver chaired by the HSCB (now SPPG) was requested to provide an understanding of the critical care capacity needs that required to remain in base units to manage any emergency situations and to provide clinical care for non-Covid patient care. It was recognised and accepted that those remaining at base hospitals would not be then operating to recognised service standards and rotas, such would be the demands anticipated with operating the regional Covid-19 intensive care facility. I was aware of and while not professionally directly involved given other responsibilities, I was supportive of the leadership of the CNO who led the nursing care response and worked closely with HSC Trusts' Directors of Nursing and the Critical Care Network Northern Ireland (CCaNNI) to agree staff training, redeployment, skill mix and patient care ratios. In parallel to the assessment of the external sites for a Nightingale Hospital facility, assessments of options for reconfiguring HSC hospital sites to increase critical care capacity were also underway. The CNO had a key clinical leadership role in negotiating the most appropriate solution and in enabling CCaNNI and the 5 HSC trusts to input to the final decision. The CNO provided additional nursing support through the secondment of a senior nurse advisor with an ICU background to support the lead nurse in CCANI and the BHSCT with staffing models and training plans. I was not directly involved in this work however I have been advised that the BHSCT led on the development of the training for redeployed staff and staffing ratio which was agreed and monitored between the BHSCT executive lead, executive director of Nursing and the CNO's senior nurse advisor. On 1 April 2020 [Exhibits INQ000103653 and INQ000346769 and Exhibit CNOG **INQ000439817**], the Health Minister agreed a submission which advised that immediate action was needed to ramp up surge capacity in the Belfast City Hospital (BCH), and that up to 230 (or potentially 250) ventilated beds could be achieved by gradually folding all other ICUs into the BCH as

pressures on capacity increased. The Covid-19 Strategic Surge Directorate in the Department wrote to HSC Silver and advised that, to meet the critical care bed demand expected, a surge plan would need to be developed which would demonstrate some units down-turning critical care beds in order to create additional capacity on a large regional Nightingale at the Belfast City Hospital Tower Block. On 3 April 2020, the Department published details of a regional plan (INQ000290310) which had been developed with the five Health and Social Care Trusts to protect access to children's and maternity services through temporary reconfiguration, while escalating the critical care surge plan using the newly established Nightingale facility at Belfast City Hospital. The plan contained several steps that could be triggered, depending on the pressures on services, including an expectation that around 50 Covid beds for adults could be made available by implementing Step One during the anticipated surge over the subsequent days. The plan was developed in conjunction with paediatric and maternity units from across Northern Ireland with the aim of ensuring continued access to urgent and emergency care from suitably qualified and experienced paediatric staff for babies and children who needed it. While the plan included a temporary reduction in inpatient paediatric services it ensured that every acute hospital continued to have senior consultant pediatricians located in these facilities to assess and treat acutely unwell children. The temporary measures were also designed to ensure that highly specialised paediatric services, including paediatric intensive care, could continue to be provided even during periods of high staff absence. The plan ensured that maternity services continued to be safely provided in Daisy Hill Hospital (Newry), South West Acute Hospital (Enniskillen), Craigavon Area Hospital (Craigavon), Altnagelvin Hospital (Derry), Antrim Area Hospital (Antrim), the Ulster Hospital (Dundonald) and the Royal Jubilee Maternity Hospital (Belfast) during the pandemic response. After careful consideration, it was agreed that antenatal services would continue at Causeway Hospital (Coleraine) but that it would not be possible to safely deliver babies in the Causeway Hospital during this surge period due to the lack of sufficient numbers of skilled paediatricians who would be needed to ensure provision of essential emergency care to a baby born throughout the 24-hour period. Women who were booked to have their babies in Causeway Hospital were contacted to arrange to have their delivery transferred to either Antrim Area

Hospital or Altnagelvin Hospital. To deliver the plan midwives were not redeployed in the same way nurses were and changes were made to the undergraduate midwifery programme by the NMC for them to opt to undertake their final six months of their programme as a clinical placement. This clinical placement supported the provision of maternity services, reflecting the pressures maternity services were under. While I was not directly involved in the development of these, as I recall, the plan and recommendations were subsequently considered and agreed following discussion at the Strategic Cell. The staffing of critical care and other units providing respiratory support was only possible by the redeployment of staff from other clinical areas and teams given the specialist nature of the skills required. In turn, the redeployment of staff was only possible with the reduction in planned elective surgery and other services and for example the support of theatre nurses with the necessary appropriate skills who moved to work in intensive care. Although these were operational matters in which I was not directly involved, this required changes to normal staffing levels and nursing staff ratios with the result of nursing staff providing care for more patients than would be normal. As described at paragraph 242, the advice of clinicians from CCaNNI was that specialist clinical staff risked being spread across too many sites and that this would become impossible to sustain over an extreme surge period and it was therefore deemed prudent to plan for these circumstances. As previously highlighted it was the advice of clinicians in CCaNNI that the concentration of intensive care teams would also have the advantage of enhancing clinical experience in providing respiratory support and including invasive ventilation to patients with Covid-19 and in addition would better facilitate the provision of guidance and support to staff working in a highly pressured environment.

248. I understand a meeting was arranged by the HSCB Director of Commissioning on 4 April 2020 with all stakeholders. I was not present at this meeting and colleagues in the HSCB (now SPPG in the Department will be better placed to advice of the actions taken following that meeting and the subsequent meeting held the following days as described at paragraph 249. I understand that the purpose of this meeting was to provide clarity around the Nightingale arrangement. It split the surge plan into three phases as it was recognised there

needed to flexibility and scalability to respond depending on the extent of the need for critical care beds:

- Phase 1 - 88 pre surge level, to 132 beds (which was the current surge level at that time);
- Phase 2 - Main hub (Belfast City Hospital – 230 beds) and smaller hubs (Altnagelvin), with centralisation of critical care staff and resources and protection of non-Covid Royal Victoria Hospital Critical Care & Cardiac ICU with all non-Covid provision in the Regional ICU at the Royal Victoria Hospital; and
- Phase 3 - 3 Hub model Belfast City Hospital, Altnagelvin and Ulster Hospital.

249. I understand a further meeting was convened by the HSCB on 5 April with further changes in the surge escalation plan agreed and colleagues in the HSCB (now SPPG in the Department) will be able to provide further details of the further actions taken at that time.

250. To the best of knowledge, Covid-19 related critical care occupancy peaked at 57 patients between the 6th and 11th of April 2020. On the 8 May 2020 as Chair of Health Gold I approved the start of planning for de-escalation for critical care across the network. Further detail on the total number of patients admitted and treated in the Nightingale and the percentage of Nightingale hospital beds occupied at the peak will be held by the Belfast Health and Social Care Trust and possibly the HSCB (now SPPG within the Department.)

251. In July 2020, CCaNNI asked HSC Trusts to provide an updated local surge plan to realign capacity with demand in the event of a second surge of Covid-19 to respond to a Health Gold request. While I was not directly involved, the HSCB (now SPPG within the Department) and Health Care Policy Group with the Department are best placed to advice, the Second Wave Surge Plan [Exhibit INQ000377221] relates to the critical care planning in December for the second surge and I understand mapped the critical care bed need from 88 critical care beds at steady state through to 110 beds at medium surge, 134 beds at high surge and 158 beds at extreme surge.

Second Nightingale

252. In April 2020, the Health Minister approved consideration of and specification for a second regional Nightingale facility in advance of the anticipated second wave of Covid-19, which it was believed could coincide with winter pressures. This included assessment of a number of potential sites and the identification of the most suitable clinical and technical requirements [INQ000276382].

253. A Project Board was established, chaired by the CNO, which recommended that the new facility should focus on step-down provision for Covid-19 patients following completion of their acute treatment and care. The Project Board instructed Construction & Procurement Directorate (CPD) to carry out a site analysis, with CPD identifying five potential sites for the second Nightingale facility. Of the five, the Eikon Exhibition Centre and Whiteabbey Hospital sites were shortlisted as the two most suitable locations. CPD ultimately concluded that the Whiteabbey Hospital site provided the most affordable and lowest risk option for delivery of a temporary Covid-19 hospital within the required timescales [Exhibit INQ000426798]. This was endorsed by the Project Board at its meeting on 19 May 2020 [Exhibit INQ000276383], with the Health Minister ultimately deciding on 1 September 2020 to move ahead with the proposal, [Exhibits INQ000276384 and INQ000276492] following assurances around the legacy usage of the facility [Exhibit INQ000370938].

254. I understand that work on the new facility began immediately, with the Northern Health and Social Care Trust (NHSCT) Board granting approval for the necessary capital works [Exhibit INQ000276495]. The NHSCT was responsible for the operation of the facility and will be able to provide information on the number of patients admitted and treated at the Whiteabbey Nightingale.

255. It was, as I recall, recommended by the Project Board although I cannot recall the precise date, and agreed by the Health Minister on 1 September 2020 that, although the main pressures would be on acute beds for those requiring inpatient hospital care there was a need for better flow through the acute bed system. The

Project Board concluded that the development of additional intermediate capacity would improve this flow and free up acute bed capacity. The Project Board also recognised that given the clinical risks associated with the transfer of patients with acute Covid-19 that clinicians would be more confident in transferring patients who were not in the acute phase of their illness to a regional facility. The Project Board also considered the complexity of delivering critical care and the associated oxygen requirements and the further workforce implications. This decision was also informed by analysis of Nightingale facilities in other UK nations [Exhibit INQ000276383].

256. For these reasons it was recommended that the Whiteabbey Nightingale would provide additional capacity for intermediate care patients, with the additional acute capacity provided at the BCH Nightingale [Exhibits INQ000276384 and INQ000276492). As a consequence of the decision to establish the Whiteabbey Nightingale as an intermediate care facility, there was no need to reconfigure existing critical care provision.

257. Work on the new facility began immediately, with the Northern HSC Trust Board (NHSCT) granting approval for the necessary capital works [Exhibit INQ000276495]. The facility was opened on a phased basis, with the first patients received in the unit on 20 November 2020 when the facility was opened as a regional inpatient Enhanced Nursing and Therapies Rehabilitation and Step-Down facility for patients recovering from an acute stay with Covid-19. Throughout the various peaks of Covid-19 inpatient admissions, the Nightingale acted as an effective pressure relief value, with occupancy levels flexing up and down to mirror those in the acute hospitals. Over the course of Covid-19 operations, Nightingale provided care to 145 patients from across Northern Ireland, saving 1,654 acute bed days. While plans were in place for capacity up to 100 beds, the phased nature of opening saw 23 beds opened initially. While I had no direct involvement and colleagues in the NHSCT and the HSCB will be better place to advise, it is my understanding that staffing was the key limiting factor to opening additional beds, with the unit, ultimately, never extending beyond the 28 beds opened by mid-January 2021 [Exhibits INQ000276496 and **INQ000276499**]. While all of the available 28 beds were utilised for Covid-19

patients over the 2020/21 winter period, this need had subsided by February 2021 and the unit didn't reach capacity again until the move to the legacy usage in spring 2021, when it was being utilised by patients without Covid-19. Although the facility retained the ability to 'flip' quickly back to a Covid-19 facility, this was not activated for future waves, with the focus on supporting efforts to rebuild services being deemed a greater overall use for the facility. By the end of January 2021, consideration turned to the legacy usage of the facility and, with occupancy below 50% of the available beds by mid-February, efforts to recruit staff for the additional units were paused until the outcome of the legacy discussions were known [Exhibit INQ000426809].

258. In February 2021, the Health Minister agreed a programme of work to implement legacy arrangements for the Whiteabbey facility, with an initial focus on potential use by fracture, orthopaedic and stroke patients [Exhibit INQ000426809] to assist with the rebuild and recover of normal services. In April 2021, with Covid-19 inpatient levels abating across the region and following the delivery of consistently positive patient outcomes, the Nightingale transitioned to offer non-Covid-19 'General Rehab' inpatient rehabilitation and step-down care until closure March 2023. Interim arrangements saw Whiteabbey focus on general intensive rehabilitation services for non-Covid-19 patients. The last Covid-19 patient left the unit on 7 April 2021, with the first non-Covid-19 patient being admitted on 9 April 2021. An important aspect of the legacy usage for the facility was retaining the ability to repurpose quickly to Covid-19 usage, should the need arise [Exhibit INQ000426809]. This ability was retained until March 2022, although it was never required.

Potential Third Wave Intensive Care Planning

259. In advance of the anticipated surge in Covid-19 cases post-Christmas 2020, the Department commissioned an exercise to test the HSC critical care plans to assess their continued ability and effectiveness for dealing with the reasonable worst-case scenario. The Department invited a Military Assessment Team, comprising regular and reservist personnel with local HSC Trust knowledge, to carry out this assessment to determine how robust the plans were in the face of

various Covid-19 modelling scenarios. The focus of the exercise was on ICU capabilities, drawing on similar work undertaken in GB to inform this exercise. Following the completion of this exercise, the HSC Critical Care Network NI met on 14 December 2020 to review the plans in the light of the recommendations of the Military Assessment Team [Exhibit INQ000276389].

259.1 While not directly involved given my other commitment and the respective roles of other ALBs such as the HSCB and HSC Trusts and HPG within the Department, I was aware that the Critical Care Network NI explored all options to maximise the number of ICU beds available across the HSC. As with many Covid-19 related issues, staffing was identified as the key limiting factor in the ability to flex capacity, particularly the number of available Intensive Care Consultants and specialty trained critical care nurses. On 5 January 2021, the Department wrote to the HSC Chief Executives across Northern Ireland and advised that, at the Covid Health Gold Command Group meeting on 4 January 2021, it had been agreed that a new command and control structure needed to be put in place to implement a revised Third Wave Critical Care Surge Plan. This would help ensure that collectively NI could deliver the level of critical care likely required during the third wave of Covid-19. With professional input from myself and other colleagues this correspondence set out the structure of the Critical Care and Respiratory Operation Hub (CCRoHub) and provided authority for the Critical Care and Respiratory Operation Hub to strategically manage critical care and respiratory admissions and transfers on a regional basis. The Hub worked to ensure that patients across NI received a critical care bed when they required a bed, that the Nightingale facility in Belfast City Hospital had the required staff to open beds and that staff were supported to look after critical care patients.

260. The Critical Care Network NI explored all options to maximise the number of ICU beds available across the HSC. As with many Covid-19 related issues, staffing was identified as the key limiting factor in the ability to flex capacity, particularly the number of available Intensive Care Consultants and specialty trained critical care nurses. The Critical Care Network NI produced a revised surge plan, which involved drawing upon all available resources locally, while also staffing the regional Nightingale facility at the Belfast City Hospital Tower at the extreme

levels of surge. While I was not professionally involved in this level of detailed operational planning, which was coordinated regionally by the HSCB with professional advice from the PHA and input from Critical Care Network and Health Policy Group colleagues within the Department, key points I understand contained within this Third Wave Surge Plan (produced in January 2021) [Exhibit INQ000276393] mapped critical care beds between 88 baseline beds and 177 critical care beds through 7 levels of surge incorporating CRITCON levels 0-4. CRITCON is a scoring system to reflect the real time observation and assessment of strain and pressures across an intensive care system, network or region. The operational detail of the scoring system and its adoption in the plan produced in January 2021 would be outwith my professional remit and colleagues in the Critical Care Network or SPPG (formerly the HSCB) would be best placed to advise. The maximum number of ICU beds that could potentially be expanded to was 177 in the most extreme circumstances, but the Critical Care Network NI was clear that occupancy levels within Critical Care started to fall in February 2021 and de-escalation plans were put in place to reduce beds. These plans were the reverse of the surge plan. The de-escalation plan resulted in Northern Ireland reducing to its commissioned bed numbers by mid-March 2021. The Critical Care and Respiratory Operational Hub was stood down formally by the Permanent Secretary at the end of February 2021, but continued to meet until 8 March 2021 to finalise the de-escalation. A small core team continued to monitor critical care capacity and take forward relevant pieces of work.

Intensive Care Planning for Further Waves

261. I understand that on the on 21 June 2021 an email was sent from the CCaNNI Chair to start the planning cycle for the Fourth Wave Surge Plan. A finalised Fourth Wave Surge Plan was agreed in October 2021 [Exhibit INQ000346762]. This plan considered that demand for critical care capacity emanates from three patient groups: those with Covid-19; unscheduled care including respiratory, trauma and other emergencies; and time sensitive elective surgery. I was not directly involved in the development of these plan and colleagues in HSCB (now SPPG within the Department) and HPG policy colleagues within the Department would be best placed to advice of the key points included in that plan.

262. My recollection is that from the autumn of 2020 there was oversight and monitoring of the Covid-19 surge plans by the with Integrated Gold Command with regular updates being provided by the HSCB to understand demand and capacity and allow the bed and staffing to be flex as and when required. I had no direct involvement in the review and monitoring of these plans. Inpatient and ICU bed occupancy statistics were published daily on the Department's Covid-19 Dashboard during the relevant period. These statistics are available on the Department's Covid-19 online dashboard.

263. In summary, the critical care escalation plans worked effectively to ensure that intensive care bed capacity was managed to meet the demand for critical care for both Covid-19 and non-Covid patients over time. The commitment and dedication of all and the monitoring and careful management of the surge plan ensured that demand and capacity was managed as effectively as possible. The Critical Care and Respiratory Operational Hub was stood down formally in February 2022.

264. The pressure on staff was however unrelenting and the challenges in ensuring those requiring respiratory support including intensive care received it, created significant ethical concerns and potential for moral distress should this not be possible. There were throughout this time significant understandable concerns among clinicians that intensive care capacity might not be sufficient to meet clinical need, this undoubtedly created significant psychological distress. This was a particular concern given the challenges that would have been associated in transferring patients requiring intensive care to other parts of the UK. Decisions on the transfer of patients are clinical decision that are appropriately made by specialist clinical teams and intensive care clinicians following direct communications. It would not be appropriate for me professionally or in my role as CMO to advise on thresholds for the transfer of critically ill patients requiring intensive care. Transfer of patients from NI to other specialist units did occur during the pandemic. For example, some patients with severe Covid-19 were transferred to specialist hospitals in England for extra-corporeal membrane oxygenation (ECMO) which is a time critical therapy for advanced respiratory

failure that by definition is for situations where there is a risk to life. This involved direct specialist to specialist discussion and the Department's Emergency Operations Centre (EOC) did assist with the coordination of this as it involved liaison with the Northern Ireland Office and the Minister of Defence for the transfer of these patients by Military transport. The Department also coordinated the transfer of non-covid seriously patients from NI for treatment outside the jurisdiction as required. This coordination role transferred from the EOC to respective Policy Cells as the pandemic evolved. Given the concerns with respect to having sufficient intensive care capacity consequently, I initiated a discussion with my counterpart within the RoI. Respective policy teams then worked to develop a mutual aid agreement in respect of intensive care capacity in the event of capacity being exceeded in either jurisdiction. This was agreed with the RoI on 9 November 2020 although it was not subsequently required.

Covid-19 HSC Clinical Ethics Forum / Regional Clinical Ethics Forum

265. Recognising the very real concerns of clinicians, in April 2020 I established the Covid-19 HSC Clinical Ethics Forum. I commissioned the Forum to develop a Framework for advice and guidance to clinicians for clinical decision making during the pandemic period and to support the work of the individual HSC Trust Clinical Ethics Committees.

266. All HSC Trusts established Clinical Ethics Committees linked to the regional Forum and participated in the development of regional guidance which incorporated guidance from the GMC and BMA and was also based on principles laid down in rights-based legislation including the Northern Ireland Act 1998, the Human Rights Act 1998 and the Disability Discrimination Act 1995. The Covid-19 Guidance: Ethical Advice and Support Framework was published in June 2020 [Exhibit INQ000353597] with further updates in September 2020 [Exhibit **INQ000381325**]. Part 1 set out the framework and ethical principles and Part 2 provided practical guidance which included issues of ethical decision making in practice and processes for accessing clinical ethics support. I commissioned a Covid-19 HSC Clinical Ethical Ethics Forum task and finish group to develop guidance to assist clinical decision-making during the pandemic period, should

situations arise when demand for clinical care exceeded resources available with the subsequent development of the "COVID-19 Guidance: Ethical Advice and Support Framework document." Initially this Forum was a sub-group of the Strategic Clinical Advisory Cell (SCAC). Membership was drawn from existing Trust Clinical Ethics Committees and others with relevant expertise such as clinicians, lay representatives, faith representatives and members of the regional Critical Care, Palliative Care and Frailty Networks. A full list of members can be found at Appendix 1(ii) of the Framework document **INQ000381325**
The Covid-19 Guidance for Ethical Advice and Support Framework [Exhibit **INQ000381325** was initially published 10 June 2020 and circulated to health and social care services, including primary care and hospices. In consultation with Disability Action, an easy read and plain version was published for service users, carers, and families and those who advocate on their behalf. Briefing on the Framework document was offered to the NI Commissioner for Children and Young People, the Equality Commission, the NI Human Rights Commissioner and the Commissioner for Older People in NI and these organisations were also given the opportunity to consult on the document. The Covid-19 HSC Clinical Ethics Forum task and finish group was concluded in June 2020 and replaced with the HSC Regional Clinical Ethics Forum with a wider membership and a mandate to support Trust Clinical Ethics Committees, improve training and awareness of ethical issues in clinical decision-making and advise the Department on policy. While to my recollection and furthermore there is no record of either the Covid-19 HSC Clinical Ethics Forum task and finish group or the HSC Regional Clinical Ethics Forum providing any other direct ethical guidance or advice to HSC staff during the specified period, as the members of the Covid-19 HSC Clinical Ethics Forum task group included the chairs or senior members of every HSC Trust Clinical Ethics Committee, support for staff decision making and advice was provided at local level in the line with the regional Guidance as published in June 2020 and during its period of development. The Framework had been developed to assist in the resolution of ethical dilemmas in clinical decision making during the COVID-19 pandemic escalation, in particular should situations arise when demand for clinical care would exceed resources available. Part 1 of the Framework sets out ethical principles in a rights-based approach aligned to the adapted guidance from the Committee on Ethical

Aspects of Pandemic Influenza 2007, revised 2020 with links to relevant legislation on human rights, disability, equality and consent. Part 2 of the Framework sets out Practical Guidance that considers a range of issues and settings such as advance care planning, DNACPR, access to critical care, care homes, end of life, visiting and mental health.

Discharge of patients, Cardiopulmonary resuscitation and integrated Advance Care Planning

267. Operational arrangements and decisions to discharge patients from hospital following the completion of an episode of care are clinical decisions for inpatient teams following detailed assessment. I did not provide advice nor was it my responsibility to provide advice on the discharge of patients to clinicians in NI and I am not aware that the concept of "enhanced discharge" was considered in NI as may have been adopted in other jurisdictions. Similarly, decisions in relation to end of life and palliative care are clinical decisions which are taken on an individual patient basis in conjunction with discussions with the patient themselves if possible, including discussion with any relatives with the agreement of the individual concerned. Dedicated guidance for the management of Covid-19 in residential and nursing Care Homes was first issued by the Department to the sector on 17 March 2020 [Exhibit INQ000120717]. While I was not leading this work nor directly involved in the drafting of the guidance developed by policy colleagues and professional colleagues in the Department, the guidance was circulated for prior to issue. A specific Social Care Policy Cell had been established initially under the Strategic Cell and later a Social Care Covid-19 Group was established chaired by the CSWO and the CNO which included representatives from the HSCB and PHA. The guidance set out actions for both Health and Social Care Trusts and for care homes, including clearer asks for Health and Social Care Trusts to work in partnership with nursing and residential Care Homes. I also invited the Commissioner of Older People in NI (COPNI) to a meeting on the 16 March attended by the CSWO, the CSA, the Director Mental Health, Disability and Older People and representatives from the PHA to discuss the situation in Care Homes and the guidance. As I recall the COPNI was represented at the meeting by the COPNI CEO. This was a further meeting to

one I had convened on the 13 March 2020. Likely challenges with staffing were recognised, there was more detailed guidance on Personal Protective Equipment (PPE), and references were made to infection management and control and admission and discharge. Guidance that patients discharged from a hospital to a Care Home must be tested for Covid-19 48 hours in advance of discharge, was first set out in Version 3 of the Interim Protocol for Testing for Covid-19 dated 19 April 2020 [Exhibit **INQ000103724** Version 3 of the Interim Protocol was communicated to HSC Trusts on 19 April 2020. The requirement that all new admissions to care homes from community settings (including from supported living accommodation) should have their Covid-19 status checked 48 hours before admission to the care home, was first set out in a letter from the Permanent Secretary dated 25 April 2020. The Department published revised guidance on 27 April 2020 which also included the updated approach to managing the discharge of patients from hospital. The guidance directed that all patients who were to be discharged from acute hospital care to a Care Home were to be tested 48 hours prior to discharge. In addition, all patients/residents who were to be transferred into a Care Home from any setting, whether that be from hospital, supported living or directly from their own home, would be tested 48 hours prior to admission to the Care Home. This would help Care Home staff to understand each resident's status and to plan their care effectively. The updated guidance clarified that all patients who were discharged from hospitals into Care Homes – whether they had tested negative or not – should be subject to isolation for 14 days. Further details of the arrangements for and coordination of patient discharge is addressed in Section E of the Departments Corporate Witness Statement to Module 3.

268. Given the significant disruption in normal arrangements for clinical care, communication, and restrictions to visiting during the pandemic this proved very challenging. While I had no direct involvement in the development of visiting guidance, I was professionally concerned at the negative impact of visiting restrictions on the health and wellbeing of patients and residents in care homes and worked to support the CSWO as policy and professional lead and the CNO to ensure that relevant guidance and policy was implemented. CNO issued the first iteration of the visiting guidance for health settings in NI on the 17 March

2020 [Exhibit INQ000120717]. I understand that the Departments M3 Corporate Statement describes the various iterations of visiting guidelines in Section B at paras 12-45. With the increased level of transmission of the virus during August and September, the Department announced on 23 September revised guidance for hospitals and Care Homes, (Exhibits INQ000256450, and INQ000276327). This revised guidance was predicated on a phased approach to visiting which had been determined was to be linked to the UK Alert Level. All health and social care facilities in NI were advised to move to facilitate one face-to-face visit per week by one person to protect patients, residents and staff from Covid-19 while recognising the importance of human contact to health and well-being. Within the update to the guidance issued in September 2020 Care Homes were encouraged to develop new Care Partner arrangements, a scheme which allowed the identification of an appropriate person to assist in maintaining each resident's physical or mental health. I had discussed this scheme with the CNO and the Chief Social Work Officer and was supportive of this approach. Care Partners were defined as: "more than visitors and likely as having previously played a role in supporting and attending to their relative's physical and mental health, and/or provided specific support and assistance to ensure that communication or other health and social care needs could be met due to a pre-existing condition. Without this input, a resident could experience significant and/or continued distress." At the Care Home Task and Finish group meeting on 8 January 2021, CMOG colleagues gave a commitment, in principle, to provide testing for care partners as part of the wider package of appropriate measures. Nominated care partners were subsequently offered regular PCR testing at the same frequency as staff, as set out in the Department's Visiting Guidance effective from 15 January 2021 [Exhibit INQ000276331] While I was not directly involved in this work to develop Visiting Guidance, although at this time I recall discussions with the CNO and CSWO with respect to our professional concerns about the importance of visiting particularly for those people living in Care Homes and direct engagement with the Commissioner for Older People and his team and representatives of the Independent Health and Care Providers (IHCP) in NI representing Care Homes and Day Care providers given our concerns. It was a key consideration throughout the pandemic response as to how best manage and seek to minimise the detrimental impact on vulnerable people. In relation to care

home residents, there was a need to balance the serious risks from the Covid-19 virus with the potentially detrimental impacts of isolation and loneliness. My DCMO colleagues in particular and I provided professional advice throughput the pandemic to inform changes to visiting guidance for care settings. For example, in December 2020, recognising concerns from care home providers about visiting and care partner arrangements over the festive season, I moved to ensure that Covid-19 testing was made available to visitors, who were not displaying symptoms of infection, as an additional risk mitigation to support visiting within the care home setting. This was an additional measure alongside existing guidance and infection prevention and control (IPC) measures to support care home visiting. On the 16 December 2020, a joint letter to the care home sector, HSC Trusts, the PHA, HSCB and RIQA was issued by the CSWO, CNO and me [Exhibit **INQ000256371**]. The letter informed the sector that the care home regulator, the RQIA, would assess the approach being taken to visiting when it was undertaking inspections of residential and nursing homes, and considering compliance with the relevant care standards. The letter also advised that the visiting policy and appropriate implementation of the policy into practice would therefore be a material consideration in the inspection and regulation of each care home. The RQIA thereafter reported weekly to the PHA, and where issues around compliance were identified, the CNO's team worked with the relevant HSC Trusts and PHA colleagues to maintain contact with the care home management to identify solutions and encourage that compliance. As an additional assurance, the letter advised that Covid-19 testing would be made available to one visitor or care partner per care home resident per week over the Christmas 2020 period and up to 8 January, and that the testing would be bookable at existing testing facilities, using the established PCR tests. The letter emphasised that safe visiting could already be accommodated as set out in regional guidance documents and should not stop after 9 January 2021. A further letter was issued by the CNO and CSWO on 15 April 2021 [Exhibit **INQ000469788** which reiterated that visiting policies and their appropriate implementation would be a material consideration in the inspection and regulation of each care home. Staff went to significant lengths to enable communication with relatives and between patients and their relatives including the use of digital technology. This however could not adequately address the loss of face to face

and human contact during such discussions. I did not provide specific advice or guidance on patient discharge or palliative care. I did ask that related supporting work be progressed with respect to advance care planning and bereavement support which is addressed in paragraphs 277-281.

269. As part of the Department's overall pandemic response, guidance was developed around the most appropriate approach to facilitating visits for those receiving inpatient care. I understand that visiting guidance is covered in section B of the M3 Corporate Statement, paras 12-45. All aspects of the Covid-19 Guidance for Nursing and Residential Homes in NI were reviewed and updated in April 2022 by the Department which included key updates in relation to Isolation Guidance and Visiting Guidance. I was not personally involved in this review. This was not a reflection of the importance I attached to the health and wellbeing of individuals and the detrimental impact of the lack of social interaction and visiting on individuals and families, rather a reflection of the many other responsibilities I had at that time. On 26 March 2020, the Department's Chief Nursing Officer issued advice to HSC Trusts which required that, with immediate effect and based on clinical advice, visits to hospitals were to be stopped in the interests of protecting patients, their families and HSC staff. There were some limited exceptions to this:

- Restricted visiting was permitted to patients receiving palliative / end of life care. Patients in ICU and other high dependency settings could also receive some limited visits;
- Women in established labour could be accompanied by one birthing partner through the birthing process (however visiting was not permitted in ante-natal or post-natal ward areas in Maternity Service settings); and
- Children admitted to Paediatrics settings, including Neonatology/Paediatric ICU could be accompanied by a parent.

270. In a fast-changing environment, the recommended approach to facilitating limited visiting was subject to ongoing review, and on 9 April 2020, updated guidance was issued which stopped face-to-face visits in ICUs, recommending that where possible virtual visits be facilitated in those settings. Further targeted guidance

for specific settings/patients was developed and issued over the subsequent period, with Palliative Care Guidance, for facilitating visiting of patients approaching the end of their life, particularly but not limited to those patients in Intensive Care Units issuing on 9 May 2020. This, and other guidance for specific settings, was incorporated into the Covid-19: Regional Principals for Visiting in Care Settings in Northern Ireland guidance document, which was published on 30 June 2020, to take effect from 7 July 2020.

271. As the pandemic progressed, the approach to facilitating visiting continued to develop, with easements and additional restrictions being introduced as the evidence dictated. The formal end of Covid-19 related visiting restrictions across all care settings came in Autumn 2022.

272. NI Policy on Do Not Attempt Cardiopulmonary Resuscitation (DNACPR) follows the recommendations of the Resuscitation Council and advice from the General Medical Council for cardiopulmonary resuscitation which seeks to restart the heart; and to not offer cardiopulmonary resuscitation in cases where resuscitation would be clinically futile (Resuscitation Council section on Guidelines for treatment decisions).

272.1 Cardiopulmonary resuscitation (CPR) is a treatment that could be attempted on any individual in whom cardiac or respiratory function ceases. A Do Not Attempt Cardiopulmonary Resuscitation (DNACPR) order is an explicit statement to prevent the inappropriate, potentially harmful or futile intervention of cardiopulmonary resuscitation on a person who is in the terminal phase of their illness or who is unlikely to survive such an intervention or if it is deemed that the risk of CPR would outweigh the benefit to an individual. A DNACPR order does not refer to any other clinical intervention.

273. The responsibility for making a DNACPR order rests with the senior clinician who has clinical responsibility for the patient during that episode of care. A DNACPR decision should be made in conjunction with other members of the multidisciplinary team including the GP. A DNACPR decision is made on clear clinical grounds that cardiopulmonary resuscitation would not be successful and

there should be a presumption in favour of informing the patient and/ or their family of the decision and explaining the reason for it.

274. Where there is no evidence of Advance Care Planning conversations, Advanced decisions to refuse treatment (ADRT) or clinical recommendations for care and treatment in the event of a sudden decline in health or an unexpected emergency, including cardiac arrest, the clinician who treating the person would make a 'best interests' decision.

275. The Department had considered reissuing a DNACPR form for use during the pandemic to support clinical decision making but on the advice of the regional Clinical Ethics Forum it was identified that there was a need for further work to develop a single integrated process for Advance Care Planning to support the DNACPR process. I subsequently commissioned further work. This was co-produced through extensive consultation and approved by the Health Minister for publication in October 2022. In the interim period the Covid-19 Guidance: Ethical Advice and Support Framework supported DNACPR decision making for clinical teams [Exhibit **INQ000381325**]. Page 30 -31 of the Framework set out guidance to be applied around DNACPR orders and explains, inter alia that, the process for putting in place such orders are sensitive and complex and should include considerations of: whether an advance decision to refuse treatment is in place; whether the wishes of the person are known for the circumstances that now arise and what treatment interventions might be appropriate – bearing in mind that DNACPR orders only relate to cardiopulmonary resuscitation, and do not mean that no other treatment or support will be provided.

276. The Resuscitation Council has recommended integrating resuscitation decisions with other treatment decisions, such as invasive mechanical ventilation, in overarching advance emergency care treatment plans through the use of the Recommended Summary Plan for Emergency Care and Treatment (ReSPECT) process which would increase clarity of treatment goals and prevent inadvertent deprivation of other indicated treatments. In NI it is proposed that the ReSPECT process will be introduced as part of the implementation of the Advance Care Planning programme. Planning for this is ongoing.

Covid-19 Bereavement Support/ Services

277. In the very early stages of the pandemic, it became apparent that it would have a great psychological impact especially on all those bereaved during this period. In March 2020 I commissioned a paper, "Mitigation Plan for Psychological Aftermath of the Covid-19 Pandemic" [Exhibit INQ000408142] to address the wider societal issues of the pandemic. The paper focused on a number of areas, one being "Individuals who die during the Covid-19 pandemic". This addressed the following issues: the impact on the relatives of those who died of/ with Covid-19 as well as those who died from non-Covid illnesses during the pandemic. Apart from the bereavement itself, the impact of grief was compounded by the significant change in arrangements for the management of deceased bodies and in public gatherings such as church services and wakes. Family and public recognition/ remembrance of loss during the pandemic period became a distressing issue for many people. A mitigation plan for this was developed to provide clear information and support to grieving families and staff. This is reflected in the plan which outlines the issues, identifies current and later risks, and any mitigation measures or action required.

278. To address the majority of the actions required in the mitigation plan, I established the Department of Health NI Bereavement Care Workstream, expanding on the already established HSC Bereavement Network. This workstream was chaired by Professor Nichola Rooney and the membership consisted of representatives from the voluntary sector, hospices, chaplains, NI General Practitioners Committee, Independent Health and Care Providers, NICS Departments such as the Department for Communities and Department of Education, HSC Board (now SPPG), NISCC, PCC, PHA and HSC Trusts.

279. The workstream identified and produced a number of resource materials/booklets, for the general public (including children), HSC professionals and care home staff and residents which provided advice to those who had been

affected by a death with signposting to services for further support, if required (i.e. Trust Bereavement Support Teams, pastoral services, children's services and wellbeing resources). Some of the resources produced were:

- Saying Goodbye When Someone Special Dies video and workbook for children, [Exhibit INQ000408143];
- Pathway and Good Guidelines for Bereavement Support in NI during Covid-19, [Exhibit INQ000408144]- Pathway & Good Practice Guidelines for Bereavement - 1 (pagetiger.com));
- Grief and bereavement during the Covid-19 pandemic: Supporting yourselves and others, [Exhibit INQ000408145];
- Death during the Covid-19 pandemic: Practical Guidance, [Exhibit INQ000408146];
- Death and grieving in a care home during the Covid-19 pandemic: A guide to supporting staff, residents and their families, [Exhibit INQ000408147]; and
- Death and grief during the Covid-19 pandemic: Supporting each other following the death of a colleague, [Exhibit INQ000377203].

280. The HSC Trusts also built on their existing and well-developed services by turning a predominantly workforce facing bereavement service through policy development, service improvement, collaborative training and engagement, into a public facing activity by providing Trust Care Call services. This new public-facing service was led by the Trust Bereavement Coordinators, supported by additional staff who had to be redeployed from the frontline because of personal risk from the virus. It involved contacting relatives of those who died in hospital to offer support and guidance, provide them with bereavement support packs which contained a number of PHA Covid-19 specific booklets, signposting to support services where needed and a follow-up telephone call(s) as required.

281. The work of the Department of Health NI Bereavement Care Workstream culminated in a report entitled "Covid-19 Guidance: Bereavement Advice and Support" [Exhibit INQ000408149]. This report made seven recommendations, one of which was "That the HSC Bereavement Network membership is expanded to become the Northern Ireland Bereavement Network, with responsibility for

developing and leading the strategic bereavement plan for the next 10 years. The Northern Ireland Bereavement Network should include all relevant cross-departmental and community organisations and agencies" (Recommendation 2). To take forward this recommendation, I appointed Dr Patricia Donnelly as Chair of the Northern Bereavement Network in March 2021. Under Dr Donnelly's leadership, the members of the Northern Ireland Bereavement Network have been responsible for taking forward the remaining recommendations in the report, and work in respect of this is ongoing.

Funeral Service Guidance

282. A particularly distressing aspect of the pandemic response with undoubted significant emotional and psychological consequences for those bereaved was the introduction of measures necessary to reduce the risk of transmission of infection associated with the remains of deceased persons and funeral services and burials. The associated guidance and regulations had significant impact on the cultural and spiritual rituals and religious rites associated with the marking of respect the deceased and the normal expression of condolences and support to those bereaved. Every effort was made to keep the associated guidance and regulations under regular review to ensure a proportionate and balanced approach recognising the need to balance the risks of infection with the significant adverse human impact on those bereaved and grieving. Despite these efforts I recognise that these measures and restrictions were extremely distressing and for some this may have exacerbated the normal grief reaction at the loss of a loved one.

283. All restrictions on funerals were contained within The Health Protection (Coronavirus, Restrictions) Regulations (NI) 2020 which were considered and approved by the Executive and subject to ongoing regular review. Following the activation of Health Gold on 9 March 2020 I established a specific policy cell comprised of officials from the Department's Death Certification Policy Branch and a medical advisor to consider aspects associated with death and death certification. This specific policy Cell's key role was to produce guidance. This included guidance: for funeral directors on handling the infection risks when

caring for the deceased and managing funerals; for health professionals on the completion and issuing of Medical Certificate Cause of Death and Stillbirth Certificates; on Death Certification and Registration; and for Verifying Life Extinct (VLE) during the pandemic [see Exhibits INQ000103643, INQ000137320, INQ000103646, INQ000103647, INQ000103648, and INQ000103723]. The policy Cell also responded to numerous queries involving Covid-19 deaths from a wide range of organisations and individuals. These included churches, clergy, local councils, funeral directors. Government Departments, PSNI, Coroners, and private individuals.

284. The guidance for Funeral Directors was initially developed in collaboration with the PHA and the National Association of Funeral Directors and took account of national guidance published by Public Health England and the differing cultural practices and rites of passage observed in Northern Ireland when someone dies. The initial guidance was approved by the Health Minister and myself and was first published on 2 April 2020. As the Covid-19 situation progressed, and with greater understanding of the disease and with consideration to the particular wider NPIs and restrictions in place at any time, revisions to the guidance were made on a regular basis. The Guidance and advice provided was broadly similar to the other Devolved Administrations however there were some differences in respect of managing and coordinating funerals mainly in relation to the different cultural traditions and practices in NI. The National Association of Funeral Directors, district councils, churches and the City of Belfast Crematorium were consulted when amendments were required and each of the revised versions were approved by myself and subsequently the Health Minister prior to issue and publication.

MEDICAL EQUIPMENT

Ventilators

285. In the first wave of pandemic the ordering, distributing, and monitoring of demand for ventilators across was led by the NI Critical Care Network (CCaNNI) in conjunction with the Procurement and Logistics Service (PaLS), which is a part of

the HSC Business Services Organisation (BSO) and is the Centre of Procurement Expertise (CoPE) for the HSC system.

286. A submission to the Health Minister dated 15 April 2020, [see Exhibit INQ000417498] provided advised on ventilators and other respiratory equipment in stock, and on order, through either HSC supply chains or a new UK national allocation programme. At that time there were 188 adult mechanical ventilators across 10 hospital sites and a further 9 portable ventilators for use during patient transfers between critical care units. This included 33 mechanical ventilators which had been ordered before surge planning as part of routine equipment replacement, as well as 21 reconditioned mechanical ventilators which had been provided to Belfast City Hospital during April 2020 by a local supplier based in NI. The submission noted that a further two reconditioned units were expected and a further 7 paediatric ventilators had been ordered and subsequently received, however these were not included in the 188 figure which referred to adult ventilators only.

Increasing Capacity

287. The submission advised that the latest pandemic modelling as of 14 April 2020 indicated a Reasonable Worst-Case Scenario (RWCS) of 90 Covid-19 ventilated critical care beds being required at the peak of the first wave. This was in addition to an estimated ongoing requirement of 35 non-Covid ventilated critical care beds, a total of 125 mechanically ventilated patients at the peak. The RWCS suggested that a further 400 Covid-19 patients would simultaneously require oxygen at the peak.

288. Surge plans at that point had been based on the previous modelling estimates from one week prior (7 April 2020) which indicated a more severe RWCS of 140 Covid plus 35 non-Covid critical care beds, totaling 175. These estimates were uplifted for planning purposes by a margin of 20% to give a target of 210 ventilated critical care beds.

289. The submission noted that further orders were in place through HSC supply chains and a central UK Government allocation programme which would bring the total to over 400 mechanical ventilators. The submission included (at Annex B) a copy of a costed proposal from Health Silver Command dated 19 March 2020 for ventilators and other respiratory equipment with estimated costs in the region of £12million and noted that Health Gold Command had confirmed approval to proceed to procurement. It was noted that, in addition to the initial Health Silver proposal, further leads for procuring ventilators had also been pursued where there was reasonable confidence of fulfilling requirements sooner. This included an order placed by PaLS on 30 March 2020 for 200 mechanical ventilators through a Republic of Ireland supplier, with the manufacturer increasing production and intended to release the Northern Ireland order in weekly batches of 50 units. While the operational assessment of the numbers of additional ventilators required were developed by Health Silver the proposals for additional ventilator capacity were also considered by me as CMO and Chair of the Strategic Cell and the Departments Permanent Secretary as accounting officer given the scale of the procurement and approvals required.

290. The submission advised that, despite the revised modelling data indicating a potentially lower demand at the peak, that it would be prudent for CCaNNI and PaLS to continually review requirements and to either revise or continue procurement of equipment currently on order, given the potential for further modelling revisions, further waves of transmission, and the lack of certainty from suppliers regarding lead times due to unprecedented global demand.

291. Whilst there was a need to seek further assurance with regard to the lead times for ventilators and other equipment on order, there were a number of other rate-limiting obstacles to expanding critical care and respiratory care capacity in the event of an extreme surge. The submission noted that these included the current hospital footprint across the HSC estate, the sustainability of the oxygen infrastructure and supply, and, in particular, the availability of sufficient numbers of medical and nursing staff. It was recognised that surge planning and increasing critical care and ventilation capacity would require an increase in

medical and nursing staff as well as additional training particularly for those being redeployed from other parts of the service.

292. The submission advised the Health Minister of the national programme for the allocation of critical care equipment, and that the scheme was managed for the UK by the Department of Health and Social Care (DHSC) in England in conjunction with the Cabinet Office and the Department for Business, Energy and Industrial Strategy (BEIS) in two components: firstly, a central programme of procurement and UK-wide distribution of stock on an 'on-loan' basis from NHS England; and, secondly, a Rapidly Managed Ventilator System (RMVS) challenge to UK industry.

293. With regard to ensuring sufficient critical care capacity and the awareness of global supply issues for ventilators, the submission noted that I had highlighted the particular challenges in Northern Ireland in discussions with my CMO colleagues. In a conference call on 30 March 2020, the four CMOs recognised that given the particular logistical and geographic challenges that the ability to transfer NI patients to ventilators elsewhere in UK would be constrained in the event of reaching critical care capacity within the HSC system. Whilst fully supporting the principle that ventilator capacity should be aligned with patient need and disease activity across the UK, I and my CMO colleagues agreed that the particular logistical challenges and lead time for deployment of ventilators to Northern Ireland should be recognised in the operation of the programme given the more limited ability to transfer seriously ill patients to other jurisdictions. In effect, the combination of having fewer ventilators per head of population than elsewhere in the UK and the difficulties with transfer of patients meant that NI had to build in "excess" ventilators locally for any surge. Paragraphs 223, 231, 232, 236, 285 and 286 refer.

National Programme

294. Under the first of the national programme's components (a central programme of procurement and UK-wide distribution of stock) the submission advised that NHS England was in the process of procuring a large volume of ventilators, and other

equipment, with the intention of allocating this as 'national NHS loan stock' to devolved nations and crown dependencies on a population basis, i.e. Northern Ireland would be set to receive 2.8% of all stock when received. This was to be shipped in phased consignments through to late May 2020, however distribution would also be prioritised to areas of peak Covid-19 need at the time that goods become available and may be withdrawn or stored in stockpiles when no longer in use. A standard operating procedure had been developed by NHS England and shared with HSCNI to help manage and track the stock.

295. The Department had not been involved from the outset of this programme in decisions around the allocation criteria/process. However, procurement leads from PaLS participated in an initial national telecall on 26 March 2020, along with representatives from NHS England, Scotland and Wales, and reported that NI could expect to receive the following equipment based on its capitation shared of 2.8%:

- 196 mechanical ventilators (total 7000);
- 224 NIV (total 8000);
- 154 Oxygen concentrators (total 5500); and
- 644 Monitoring Equipment (23,000)

296. Under the second component of the national programme (a Rapidly Managed Ventilator System (RMVS)) the Health Minister was advised that this was a largescale initiative announced by the Secretary of State for Health on 20 March 2020 which involved 13 different work streams. It was progressing rapidly, with an expectation at that time that in the coming weeks tens of thousands of ventilators and other respiratory equipment would be allocated around the UK, also as 'national NHS loan stock'.

Healthcare Provision and Improvements in the Clinical Care and Treatment of Covid-19

297. In order to ensure the effective communication of best practice guidance and clinical protocols with respect to the treatment and care of people with Covid-19 and to ensure this as kept up to date, on the 21 March 2020, I asked Dr Julian Johnston (a member of CMOG) to establish a Strategic Clinical Advisory Cell with Dr Paddy Woods (a former DCMO) and others as appropriate. A Strategic Clinical Advisory Cell (SCAC) was established which was made up of a multidisciplinary team from the Department, the PHA, the HSCB, the 5 Trusts, Social Services and representatives from the primary care Covid-19 Centres. I asked that SCAC link with the other devolved administrations, NHS England, the Royal Colleges and Clinical Networks in NI to disseminate clinical advice and guidance including specific guidelines and protocols to the HSC. This included, for example, the consideration and dissemination of the Covid-19 rapid clinical reviews by NICE, and RCOG advice on Covid-19 in pregnancy. Examples of the work of the SCAC also included:

- Advice on the establishment of a Covid-19 HSC Clinical Ethics Forum;
- Clinical Prioritisation guidelines to assist clinicians and health care Trusts in the coordination and or potential prioritisation of ICU admission for patients within a hospital, including the admission of patients from the community into hospital. Several types of clinical prioritisation and decision support tools and aids were drafted in England and Scotland by various bodies, such as, NICE (Critical care in adults NG159), Intensive Care Society and NHS England. These were discussed in detail within the SCAC and the newly formed Regional Covid-19 Clinical Ethics Forum. No regional NI guidelines were produced as the national guidance with its scale and authority was judged to be safer and more likely to produce consensus in a timely fashion. Some of these decision aids were activated in England e.g. CRITCON (UK Critical care readiness Condition) in the early stages of Covid-19 but not in NI. Therefore the proposed coordination and prioritisation support role for SCAC was not subsequently required, probably because of the smaller population and region with its more direct reporting, coordination and networking capabilities between the Trusts and their ICUs. The usual ICU procedures and decision making were able to deal with any local pressure and potential overload using mutual aid and transfer between hospitals. I believe this was a

significant advantage of the close professional relationships and established networks in NI and the leadership from the Critical Care Network and respective ICU teams.

- Advice on the ongoing consideration and approval of Covid-19 Rapid NICE guidelines;
- Advice on the ongoing care needs of Covid-19 patient with symptoms following discharge from hospital - as requested by the Health Minister. SCAC formulated a new clinical working group to consider the immediate and longer-term rehabilitation needs of Covid-19 patients following discharge from hospital and with continued symptoms following Covid-19 including those with post Covid symptoms or syndrome including those with Long Covid;
- Advice on the development of Workforce related Guidance for example in supporting the Workforce Policy Cell on clinically related aspects of workforce issues, which included issues relating to pregnancy in the both the wider public sector and healthcare workers; and
- Advice on Shielding including input to the 4 Nations Shielding Forum, advice on social Distancing and the implementation of badges and lanyards to help identify the clinically vulnerable.

298. In addition, the SCAC provided clinical advice with respect to the CEV and CV supporting the work of the CEV Cell which informed my consideration of related guidance.

299. The health and social care services needed to adapt rapidly, and extraordinary efforts were made to confront the challenges to deliver care and to innovate while under extreme pressure. While formal research studies provide the gold standard for evidence-based care much of the initial reduction in mortality and improvement in care was in advance of these. This aspects of the response to the pandemic and improvements in clinical care and treatment are considered more fully in the UK CMO Technical Report, Chapter 9: pharmaceutical interventions: therapeutics and vaccines pages 313 to 336 and Chapter 10: improvements in the care of Covid-19 pages 343 to 359. The CMO Technical Report in Chapter 9 considers the development of Covid-19 therapeutics and

pharmaceutical interventions and Chapter 10 pages 342-353 consider the evolution of clinical care, [see Exhibit **INQ000203933**.

300. Throughout the pandemic, those working in health and social care have gone to extraordinary efforts in highly pressured environments to deliver care and protect patients and colleagues, even when this presented potential risk to their own physical and mental health. They continued to work under these pressures despite the potential significant risk of exposure to a new and largely unknown virus. During surges in the pandemic, they were managing not only the care and support of patient and relatives in the most difficult of circumstances, but in the addition the risk of transmission both with at work and at home, and the fear of harm to patients, colleagues, vulnerable family members and themselves. The impact on morale was considerable and the support from the public in adapting to changes in services to manage surges and the wider efforts to reduce infection rates in the community were hugely important.

301. In this pandemic rapid innovation by clinicians and the spread of new best practice steadily improved clinical outcomes. This occurred throughout the health service, public health and the wider health and social care sector in a number of ways. With respect to clinical management initially this involved the sharing of developing best practice in real time by clinicians and scientists from countries with early clinical experience of the pandemic. This allowed the early management of people with Covid-19 in the UK to be based on some element of prior clinical knowledge and experience. Formal early clinical trials and formal observational studies started in UK at almost the same time the first cases were imported. While these provided the most robust testing of drugs and other interventions, clinicians adapted rapidly as they observed patients' progress and learned.

302. These initial changes in practice as clinicians in the UK and elsewhere learned and adapted, sharing best practice was extremely important and is likely to have significantly contributed to the fall in mortality between the first and second waves of the pandemic. Some examples where clinical practice changed early in advance of formal trials include:

- the recognition of the high rates of pulmonary embolism and the use of empiric prophylactic and therapeutic doses of anticoagulants;
- the use of high flow oxygen therapy including the continuous positive airway pressure (CPAP) approach) based on oxygen levels;
- the regular adoption of "proning" in intensive care units (ICUs);
- a move away from mechanical ventilation; and
- the identification of several distinct Covid-19 related syndromes

303. Later in the pandemic, the syndromes of 'Long Covid' and paediatric inflammatory multisystem syndrome associated with SARS-CoV-2 (PIMS-TS) in children were recognised by clinicians. Subsequent changes in clinical practice were increasingly informed by formal scientific research studies. This included major observational studies like SARS-CoV2 immunity and reinfection evaluation (SIREN), the Covid-19 Clinical Information Network (CO-CIN) and then therapeutic trials including the Randomised Evaluation of Covid-19 Therapy study (RECOVERY) as they began to publish on clinical outcomes. Across the UK respective health services were systematic in requiring that new treatments were used in formal trials where possible. The use of pharmaceutical interventions and treatments are considered in the UK CMO Technical Report Chapter 9 [see Exhibit **INQ000203933**].

304. In the first months of the pandemic, with only a small number of confirmed Covid-19 cases in the UK, it was agreed to use existing High Consequence Infectious Disease (HCID) protocols to prevent transmission risk within healthcare settings by delivering clinical care in a small number of cases in highly specialised settings. The purpose was to prevent in so far as possible any spread from confirmed cases and to optimise the care of patients. This also allowed knowledge and experience of clinical management to be developed which could then be shared. The limited number of HCID beds in the UK meant this was only possible when the numbers needing hospitalisation were small and community transmission was limited. This presented challenges for NI given the

absence of HCID beds and the difficulties with patient transfer despite UK agreement to facilitate and support such transfers.

304.1 From January the Department of Health and Social Care in England had convened daily 4-nation teleconferences which officials, while the Public Health Agency had organised a regional teleconference involving the HSC Trusts to discuss preparation for dealing with suspected cases in NI. There were also a number of subgroups on communications and on virology which the PHA were taking part in and the PHA were working with PHE on producing guidance for Primary Care which would be issued in due course. At this time the PHA were also working to ensure that extant protocols for the assessment, management and potential transfer of patients suspected of having a High Consequence Infectious Disease (HCID) were updated as appropriate and disseminated to the relevant Health and Social Care professionals.

304.2 In the first months of the pandemic, when there was only a small number of confirmed Covid-19 cases in the UK, it was agreed in discussion with CMO colleagues across the UK to use existing High Consequence Infectious Disease (HCID) protocols to prevent transmission risk within healthcare settings by delivering clinical care to then small number of cases in highly specialised settings. The purpose was twofold: to prevent in so far as possible any spread from confirmed cases; and to optimise the care of patients by allowing knowledge and experience of clinical management to be developed which could then be rapidly shared. The limited number of HCID beds in the UK meant this was only possible when the numbers needing hospitalisation were small and community transmission was limited. This presented challenges for NI given the absence of HCID beds and the difficulties with patient transfer despite UK agreement to facilitate and support such transfers.

304.3 Alternative plans were developed by the PHA with the establishment of transfer arrangements to the Regional Infectious Disease Unit, Ward 7a Royal Victoria Hospital if a decision is taken to admit a patient who tested positive given that NI does not have HCID beds. Plans were also being drawn up to enable a patient to be transferred to a High Consequence Infectious Diseases (HCID) Unit in

England, if required. I was involved in discussions with colleagues in England on the 27 February 2020 when the first case in NI was identified to arrange transfer to an HCID unit in England in keeping with the agreed protocol. Ultimately the transfer was not possible as existing transport arrangements established by the HSCB were not appropriate and a MACA request to the MOD was declined. Clinically the individual was otherwise well, and the transfer was not deemed warranted on clinical grounds.

305. As cases rapidly increased following widespread community transmission, health services saw a surge in patient need with significant numbers of people with Covid-19 presenting. At this point it was necessary to manage the demand for Covid-19 care alongside existing health needs while also managing the risk of transmission within healthcare at the same time as rapidly scaling up significant capacity for the clinical care patients requiring hospital and intensive care. This required a rapid change in how care was delivered. Intensive care capacity increased with whole floors being taken over for care of severe Covid-19 patients; nurses and doctors were redeployed to completely different areas of work; new ways of delivering care and support at home and in the community (such as primary care Covid-19 Centre) were rapidly established; and there was a significant increase in providing primary care and outpatients services remotely.

306. During the pandemic, infection prevention and control (IPC) also evolved as the epidemiological picture changed and other elements of the wider response developed with new evidence emerging. For example, changing case definitions and limitation on testing in the first few months of the pandemic made it difficult for healthcare settings to identify and confirm cases and to put appropriate IPC precautions in place. While the first few cases were managed according to high consequence infectious disease (HCID) protocols, as the numbers of patients with Covid-19 in hospital increased and community transmission increased, spread meant that it was essential that a balance was reached to ensure that there remained proportionate and deliverable care throughout all health and care settings. Transmission within health care setting (nosocomial transmission) was

a particular concern during the first and second wave, as healthcare settings worked to manage surging demand while rapidly identifying cases and implementing relevant IPC actions in response. Limited testing early in the first wave complicated this picture further however as testing capacity grew and IPC guidance adapted in response to the changing situation, nosocomial transmission reduced. With widespread community transmission cases rose rapidly leading to the first wave and the health service saw a surge in demand. At this point it was necessary to simultaneously manage rising Covid-19 care demands alongside existing health needs, rapidly scaling up the arrangements for the clinical care of patients requiring hospital care - including intensive care - while reducing the risk of transmission within healthcare settings. As care for Covid-19 patients with urgent and extensive was prioritised, routine and non-urgent services were paused.

307. Initially evidence on appropriate clinical care was still emerging and oxygen delivery was a priority. As the wave progressed, clinicians rapidly developed and shared best practice, including on the importance of proning, anticoagulation and effective use of high-flow oxygen guided by pulse oximetry [Exhibit INQ000283587]. Following the first wave, evidence from studies and then trials of effective pharmaceutical interventions began to emerge and was implemented rapidly see paragraph 301. At this time the there was a need to balance the transmission risk with the impact of highly specified IPC guidance on service delivery. From February 2020 and the start of the first wave the Health Service had begun to make changes how services were provided. An essential element of the health service preparation was to ensure the continued access to emergency and essential services, including general practice, dental services, maternity and children's services, cancer services and screening services for high-risk conditions. this included: the established of Covid Centres in primary care to see people with symptoms of Covid-19; changes in the provision of services with some being provided remotely, reduction in the numbers of people that could be seen and changes in the location of certain other service due to IPC guidance and to reduce the risk of transmission. This involved, for example the development and implementation of alternative service models such as Covid-19 Centres, virtual general practice and hospital consultations, the establishment of

urgent dental care centres, including treatment pathways for those with cancer, given their increased risk from Covid-19. All these pathways and new service arrangements progressed and were coordinated by Health Gold Command Strategic Cell. Despite the considerable efforts by the HSC, there was regrettably a significant impact on non-urgent elective activity and a range of other planned services, including routine screening programmes and support services. Extensive efforts were made to provide as many of these services by alternative means as possible, while minimising the risk of infection. The Health and Social Care (NI) Summary Covid-19 Plan for the period mid-March to mid -April 2020 set out the high-level changes. The various delivery bodies at Health Silver and Health Bronze levels produced the implementation plans. These plans involved the pausing of screening services and the cancelling of elective care. From the end of the first wave and from June onwards the delivery of healthcare services was changed to allow as much routine and non-urgent care to be expanded alongside continuing support for Covid-19 patients.

307.1 Following the first wave, the health service worked extremely hard to maintain as much non-emergency and non-Covid-19 care as possible in the face of repeated waves of Covid-19 and those who achieved this deserve our recognition. Later, considerable efforts were made by teams across community, primary and secondary care and by HSC Trusts, the HSCB and PHA under the oversight of the Rebuild Management Board to achieve recover of services as soon as possible. For example, in April 2020, 5 routine screening programmes were paused for 3 months: routine cervical screening; routine breast screening; bowel cancer screening; abdominal aortic aneurysm screening and routine diabetic eye screening and surveillance monitoring. In mid-March 2020 the PHA working with the HSCB produced proposals on pausing population screening programmes in the context of the emerging Covid-19 outbreak in NI. The PHA proposals were to pause most screening programmes for a defined period 3 months in the first instance to release staff to other duties related to the Covid-19 response while completing screening investigations and ongoing monitoring for those people who were under investigation for a potentially adverse screening result at that time.

307.2 A paper on the risk assessment undertaken by the PHA for each screening programme was shared with the Strategic Cell in mid-March 2020 [Exhibit INQ000346699]. Proposals [Exhibit INQ000120730] on the temporary cessation of population screening programmes were submitted to the Health Minister for consideration and decision. The Health Minister agreed to pause certain screening programmes while maintaining those that are time critical and/or focussed on high-risk occupations. Screening did however to be continued to be offered to people who required higher risk breast screening, diabetic eye screening for pregnant women, newborn bloodspot screening, newborn hearing screening, antenatal infections screening and smear tests for non-routine cervical screening. After the first wave, in June 2020, the PHA established a 'Screening Restoration Group' to coordinate the process of restoring screening programmes and individual programme specific plans were developed.

307.3 It was decided that cervical screening would be restarted at the end of June 2020, early July 2020 for abdominal aortic aneurysm, mid-July 2020 for breast screening and August 2020 for diabetic eye screening and bowel screening [Exhibit **INQ000348873**]. The timing of restoration was individualised for each programme in terms of based on the, for example, considerations on the redeployment of staff, capacity, vulnerable population and impact on facilities. Individual screening programmes were therefore restarted when assessed as ready to do so, rather than a consideration of anyone programme being more urgent than others. Progress updates were provided monthly to the HSC Rebuilding Management Board. Examples of the updates provided in July and September 2020 are provided in the attached exhibits [INQ000276322, INQ000276323, INQ000276324, and INQ000276325]. As described in paragraphs 33-37 this work was progressed by the HSC Trust working closely with the HSCB and PHA with oversight by the Rebuild Management Board chaired by the Permanent Secretary which had been established in June 2020. As such the health service operational oversight and coordination role of the Strategic Cell in the first wave was replaced by the newly established Management Board [Exhibit INQ000137342].

307.4 The Department's response to Covid-19 had now moved beyond the arrangements described in the ERP and was in effect being absorbed into a more 'Business as Usual' model, with a substantial portion of the staff within the Department continuing to be repurposed to work routinely as part of the Covid-19 response within their respective policy teams. My focus during this period with the establishment of the Rebuild Management Board increasingly changed to oversight of the wider public health response through a number of programme boards I established. These included boards overseeing the testing and contact tracing service, the roll out of community testing with Lateral Flow Devices (LFDs), the implementation of Covid-19 antiviral treatment protocols and the implementation of the Covid-19 vaccination programme. Delivering routine services alongside rising case rates in the second wave placed huge pressure on the health services and staff. At the same time, an improved understanding of Covid-19 and shared developments in clinical practice, alongside available therapeutics, helped manage this second wave in clinical settings.

308. The impact of the second wave on non-Covid-19 care was smaller, despite larger numbers of cases, because of this adaptation. As the pandemic and subsequent waves progressed and levels of immunity in the population increased through a combination of vaccine rollout and from previous infection, rates of severe disease reduced, and clinicians became increasingly familiar with management of Covid-19 as part of regular practice. They also increasingly saw patients with Covid-19 who were in healthcare settings with, rather than due to Covid-19.

309. In the first weeks of the pandemic, little was known about Covid-19 and there were limited treatment options beyond the use of oxygen and respiratory and other supportive care. Clinical understanding of the disease rapidly accumulated from early case reports and data from countries where the first wave was further advanced. These were important in learning more about the disease and its complications and outcomes. This learning was rapidly disseminated through existing informal and formal clinical networks so that regions already experiencing high volumes of patients could share their learning with others further behind in the wave. These clinical networks along with early case reports was a driver of changes in clinical practice that improved care in Wave 1 ahead of

formal observational trials in Wave 2 and clinical trials Wave 3 and the deployment of specific pharmaceutical interventions and vaccines. This is covered more fully in the UK CMO Technical Report, Chapter 9: pharmaceutical interventions: therapeutics and vaccines [see Exhibit **INQ000203933**].

310. Observational studies such as the International Severe Acute Respiratory and emerging Infection Consortium (ISARIC) and SIREN (which are explored in Chapter 1: understanding the pathogen and Chapter 9 of the UK CMO Technical Report [see Exhibit **INQ000203933**] provided evidence during the early stages of the pandemic, months ahead of results from formal clinical trials. Mortality rates in hospitalised patients were highest in the early months of the pandemic declining towards the end of the first wave with further decrease in subsequent waves. Part of this reduction was undoubtedly due to shielding of those most at-risk, growing immunity and easier access to testing and medical advice. However, increased clinical experience and improved clinical management also improved outcomes, with analyses from ISARIC suggesting that one-fifth of the reduction in in-hospital mortality in the first wave could be accounted for by changes in treatment including optimum respiratory support and in due course steroid treatment).

311. During the first wave, acute hypoxaemic respiratory failure was almost universally seen in severely unwell patients with Covid-19. Initially, there was an emphasis on early intubation. International experiences in Italy and China reported high mortality in patients requiring intubation and ventilation and highlighted the potential risk that ICU capacity might be exceeded. In addition to increasing ICU capacity consideration of non-invasive respiratory support intervention such as Continuous Positive Airways Pressure (CPAP) and high-flow nasal oxygen (HFNO) was therefore part of the approach taken to reducing the need for intubation and invasive ventilation to reduce pressures on ICUs and as a potential strategy to reduce mortality. The approach of delaying intubation for a trial of non-invasive ventilation subsequently became a routine part of practice with general success.

312. Based on evidence before Covid-19 and evidence of the benefit of proning for non-Covid-19 ARDS (Acute Respiratory Distress Syndrome) ventilated patients and anecdotal reports of improved oxygenation and ventilation in Covid-19 patients, the widespread use of prone positioning of mechanically ventilated patients soon became a key component of respiratory support. Later with formal guidance from the National Institute for Health and Care Excellence (NICE), the approach was extended to include conscious non-ventilated patients. In some ICUs, the numbers of patients requiring this management led to the development of 'proning teams' of redeployed staff to reduce workload on ICU staff. This also helped standardise the process while maintaining patient safety.

313. In most, Covid-19 is primarily a respiratory disease, there was however increasing early recognition that severe disease was a complex multisystem disease involving the immune, clotting, renal and cardiovascular systems. Severe disease that required ICU admission might present with respiratory failure alone, or with multi-organ impairment or failure. The exaggerated immune response observed in the most severely affected typically occurred in the second week of their illness and was characterised by the over production of proinflammatory cytokines in the patients. This was closely associated with capillary leak syndrome with fluid leaking from blood vessels into body tissue, disseminated intravascular coagulation which saw abnormal blood clotting throughout the body's blood vessels, ARDS, and multi-organ failure, ultimately leading to death in the most severe cases.

314. Despite concerns based on experience with SARS-CoV-1 and MERS-CoV that immunosuppressant drugs such as steroids might impair immune responses, dexamethasone was trialed in hospitalised patients during the first wave as part of the RECOVERY trial. Within six months after the first UK case, dexamethasone was approved for immediate widespread use in hospitalised patients with requirement for supplemental oxygen, having been shown to substantially reduce morbidity and mortality. As a consequence, mortality was substantially reduced in the second and third waves of the pandemic.

315. A further aspect of the multisystem disease observed by clinicians early in the pandemic was the increased incidence of acute kidney injury among patients hospitalised with Covid-19. This association was particularly pronounced in the first wave, where more than 25% of patients admitted to critical care required renal replacement therapy (RRT), with very high mortality (80%). In the first wave, in many ICUs it was the availability of RRT (machines and disposables) rather than ventilators that was most challenging in terms of equipment provision. Improved understanding of the disease and less restrictive fluid management strategies likely contributed to this becoming less of a challenge as the pandemic waves progressed.

316. The acute proinflammatory response in Covid-19 most probably led to the increased risk of thromboembolic or clotting problems seen in patients with severe Covid-19, and to a lesser extent the bleeding complications. This presented as both small vessel and larger visible thrombotic episodes with up to a third of patients admitted to ICU experiencing thromboembolic events. Enhanced thromboprophylaxis to prevent these clotting events was rapidly introduced for patients identified as at risk. Even with heparin prophylaxis as standard, pulmonary thromboembolism was identified in about one-quarter of Covid-19 patients admitted to ICU, with deep vein thrombosis also observed in one-quarter of patients with pulmonary thromboembolism.

317. Cardiac complications such as cardiomyopathy, myocarditis and arrythmias were also recognised as part of the multisystem disease seen in severe Covid-19. Advanced cardiovascular support being required for 1 in 3 patients requiring mechanical ventilation.

318. By the end of the first wave, the management of hospitalised patients had evolved significantly. Seriously unwell patients often had a trial of non-invasive rather than invasive ventilation, hypovolaemia or low blood volume was avoided enhanced thromboprophylaxis provided as standard for at risk patients, and many were randomised to receive dexamethasone.

319. At the start of the second wave, dexamethasone was in widespread use. Evidence from other clinical trials grew in the second and third waves and closed gaps in knowledge not addressed through observational studies and clinical networks. As a result of these trials, many patients hospitalised during the third wave were also treated with more targeted drugs. This included small molecule directly acting antivirals and monoclonal antibodies which improved clinical outcomes further. This is considered in the UK CMO Technical Report, Chapter 9: pharmaceutical interventions: therapeutics and vaccines [see Exhibit **INQ000203933**].

320. Clinical trials also helped to address the absence of evidence to support the new widespread use of different types of non-invasive ventilation which had resulted in significant variability both in international guidelines and clinical practice during the first and second waves. The UK RECOVERY-Respiratory Support trial found that an initial strategy of CPAP significantly reduced the risk of tracheal intubation or mortality compared with conventional oxygen therapy, or HFNO in patients with acute hypoxaemic respiratory failure, and provides some support to this approach. The implementation of the Covid-19 vaccination programme and widespread immunisation and increasing immunity from prior infection resulted in a significant reduction the number of patients with severe Covid-19 requiring ICU with numbers falling substantially in spring 2021. Throughout 2020 to 2021, Covid-19 remained a severe disease for many, with some requiring prolonged ICU and with high associated mortality rates. Even with improvements in understanding of the disease and the introduction of specific therapeutics, for those patients requiring intubation and ventilation, multi-organ support was typically required. Duration of ICU care for such patients typically lasted several weeks, and mortality remained high.

Rare and late complications of Covid-19

Long Covid or post Covid syndrome

321. Before the emergence of SARS-CoV-2, multiple viral and bacterial infections were known to cause postinfectious illnesses such as myalgic

encephalomyelitis/chronic fatigue syndrome (ME/CFS), and it appears that Long Covid may share some of the same characteristics. Long Covid which is sometimes referred to as 'post-acute sequelae of Covid-19' or post Covid syndrome is a multisystemic condition comprising often severe and debilitating symptoms that follow acute respiratory SARS-CoV-2 infection. A recent review [Exhibit INQ000408150] estimated that while the true number of people affected is likely to be much higher due to many undocumented cases, the incidence in non-hospitalised patients is between 10–30%, up to 50–70% of hospitalised cases and 10–12% of vaccinated individuals who develop Covid-19. With some 651 million documented Covid-19 cases worldwide with a conservative estimated incidence of 10% of infected people affected with Long Covid, this means that at least 65 million individuals around the world are estimated to have Long Covid and the true number is likely much higher [Exhibit INQ000408151].

322. Long Covid can occur following any acute episode of disease irrespective of severity, and it can affect all ages with the highest number of people diagnosed between the ages of 36 and 50 years. Most Long Covid cases are in non-hospitalised patients following a relatively mild acute illness as this represents the majority of Covid-19 cases in the population. Unfortunately, there are many research challenges to be answered, particularly in respect to the pathophysiology or underlying disease process, development of effective treatments and identification of risk factors. Many biomedical findings have been documented in those affected, with many patients experiencing dozens of symptoms across multiple organ systems.

323. The condition itself has been associated with a wide range of new commonly described symptoms and organ specific complications which include cardiovascular, thrombotic (blood clotting),cerebrovascular disease, type 2 diabetes, myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS) and dysautonomia (which is a disorder of the autonomic nervous syndrome and can present with a condition known as especially postural orthostatic tachycardia syndrome (POTS) which is a blood circulation disorder those affected experiencing symptoms as a consequence of a drop in blood pressure when standing). Other symptoms which are commonly described include: neurological

and cognitive symptoms including memory loss, cognitive impairment, dizziness and problems with balance and taste and sense of smell. Respiratory symptoms such as shortness of breath and cough are the most common respiratory symptoms. It is now known that symptoms can last for years, and some may indeed be lifelong with significant numbers of people with Long Covid unable to return fully to the activities of daily life or work. Unfortunately, there are currently no evidence-based treatments that have been shown to be effective other than treatment of the associated symptoms.

324. A number of theories have suggested the underlying cause although as yet none of these are conclusive. These theories include persisting reservoirs of SARS-CoV-2 infection in body tissues, immune dysfunction following infection with the development of autoimmunity where the body's immune system is triggered into responding against its own cells, and microvascular blood clotting within small vessels causing dysfunction to the endothelial cells lining the blood vessels. It is likely that there are multiple, potentially overlapping, causes of Long Covid.

325. Understanding of how best to manage Covid-19 has continued to evolve, as has the recognition of rarer or late long-term sequelae of Covid-19 infection. While many chronic symptoms were reported by about 2% of people weeks or months after their initial acute infection the severely disabling symptoms experienced by some patients profoundly affected their ability to return to the activities of normal life. As indicated in paragraph 323, these late symptoms or 'Long Covid' consisted of a wide range of symptoms most likely due to a combination of conditions including organ damage by severe or milder Covid-19 infections. Research into the causes, and management of this disorder continues with recognition and understanding improving. The Department has continued to recommend that commissioners, service and health professionals follow the measures recommended in NICE guideline NG188 "Managing the long-term effects of Covid-19" which provides recommendation on the identification, assessment and investigation, referral and management of those living with the long-term effects of Covid-19. It is undoubtedly the case that many people's lives continue to be severely affected by Long Covid and further research to improve

our understanding of the causes and most effective treatments is required. The identification and characterisation of Long Covid has appropriately been the subject of ongoing clinical observation and research study across the UK and internationally in which I was not directly involved. My role was in commissioning work to review the adequacy of services to provide treatment and support to those affected and in considering recommendations from NICE following review by the Clinical Advisory Group, described at paragraph 297, as to their applicability for people affected in NI. We have continued to recommend that the HSC in NI follow the recommendations in NICE NG 188 [Exhibit INQ000238545] which was a NICE Covid-19 Rapid Guideline, which was published by NICE on 18 December 2020 and endorsed by the Department for use in NI. This guidance provides recommendations on the identification, assessment, investigation and referral and clinical management of people living with the long term effects of Covid-19.

326. Following a request from the Health Minister I established a Clinical Working Group in July 2020 to review the needs of those recovering from Covid-19, specifically following a hospital admission. The group was regional and multi-disciplinary and focused on the physical, social, psychological and mental needs of patients following an acute hospital episode of Covid-19 [Exhibit **IINQ000469789**] A series of meetings were held over the summer of 2020 with a wide range of healthcare professionals from throughout NI. The aim was to identify how the needs of post Covid-19 patients were currently being met and how this could be improved through the development of patient care pathways, clinical guidance and protocols. Over 60 individuals attended the meetings, or linked in, with representation from medical, nursing, allied health profession (AHP), psychology and social work recognising the diverse impacts of the post Covid condition and Long Covid. Following the conclusion of the work in December 2020, the National Institute for Health and Care Excellence (NICE), published a rapid guideline on post Covid-19 syndrome [see Exhibit INQ000238545]. This guideline was accepted for Northern Ireland.

327. The review did not itself produce any working guidelines or advice as that was not its purpose, expert clinical guidance in NI as in the rest of the UK was

informed by relevant NICE guidance. The review was established to assess the adequacy of existing services as benchmarked against the NICE rapid guideline on post Covid condition and Long Covid and to identify opportunities for improvement and to enhance extant services. The responsibility for the provision of appropriate services remained with HSC Trusts and the HSCB and PHA as commissioners of health services in line with NICE guidance as approved by the Department. The review found that while there were very good working NI models offering post Covid-19 follow-up care to various groups of patients, there were a variety of models operating across NI offering post Covid-19 follow-up care to various groups of patients. A number of recommendations were made to improve and expand the service models in all Trusts to the correct level of care to all those that need it. The report recommended that, so far as possible, disciplines working on post Covid-19 recovery should be incorporated into a follow-up 'one-stop' clinic. Where a discipline cannot contribute to a 'one stop clinic', there should be regionally uniform signposting adopted. The report found evidence of services operating separately and not fully connected with other service areas. In addition, engagement between each of the 4 main categories of post Covid recovery services (Physical, Psychological, Mental Health and Social Care) by Trusts was not uniform throughout NI. It found the 'one stop shop' model operating in Belfast Health and Social Care Trust most closely resembles the integrated multidisciplinary assessment service envisaged by NICE and which had at that time then been established in England.

328. The report identified that post Covid 19 recovery could be assisted by the provision of good quality self-help resources, including the provision of good quality online resources, which are important for aiding self-management and in addition the signposting to appropriate services available locally to support recovery. It found that there were already good online resources available including the NHS England interactive platform, "Your Covid Recovery." It also identified the need for specialist clinics in NI. The Health and Social Care Board (HSCB) was subsequently asked to initiate work in respect of the assessment of people who continue to experience long-term health effects as a result of Covid-19 infection [Exhibit INQ000408153].

329. On 14 June 2021, the Health Minister announced new services for the treatment and assessment of post Covid-19 syndrome, also known as 'Long Covid' as defined in the guideline issued by NICE. The new services were launched on 1 November 2021. It is my understanding that in February 2021, an initial proposal was submitted by the HSCB that a multi-disciplinary team be established to provide assessment clinics, with the team comprised of a range of disciplines including physiotherapy, occupational therapy, psychology, and dietetics based on the model then already established in England. It was expected that, at the outset, ongoing therapy following assessment would largely be provided within core health and social care services. Following further consultation with professional bodies and organisations, a revised proposal was received by the Department from the HSCB in June 2021. The revised proposal offered a comprehensive service drawing from the available clinical guidance, and experience in the treatment and management of people to date with Long Covid and best practice from across the UK. The new services included the establishment of a multidisciplinary assessment service for post Covid-19 patients across all five HSC Trust areas open to referrals from both primary and secondary care. I have been advised that the service delivery model also strengthened core services for psychology and post-critical care recovery in the long-term including follow-up services for patients. Funding of £1m was allocated for the new services as part of the Department of Finance's Covid-19 exercise at June 2021 monitoring round. I had no further personal or professional involvement and therefore further information on the development and subsequent commissioning of the service and its performance would be best provided by the HSCB (now SPPG within the Department).

Covid-19 in Children

330. While children were not spared from the effects of Covid-19 and there were undoubtedly tragic cases, on a population basis children make up a very small proportion of Covid-19 hospitalisations and even a smaller proportion of deaths which are rare. In the early months of the pandemic, a number of countries reported some children with symptoms similar to Kawasaki disease (KD) and toxic shock syndrome (TSS). Enhanced prospective surveillance by the British

Paediatric Surveillance Unit and Public Health England (PHE) demonstrated a strong association between this condition and SARS-CoV-2, with children developing KD or TSS symptoms with single or multi-organ failure several weeks after initial Covid-19 infection. Paediatric Inflammatory Multisystem Syndrome (PIMS-TS) while very rare is the most severe recognised complication in children, with 42% of 268 cases detected during the first wave of the pandemic requiring ICU admission, though mortality was relatively low at 1.1%. Evidence of an increased incidence of inflammation of the lining around the heart in the form of myocarditis and pericarditis in younger people following Covid-19 infection was also observed several months into the pandemic. Subsequently this was also identified following Covid-19 vaccination, although much less commonly than with other routine vaccinations. The great majority of cases were mild and resolved spontaneously. While in the early months of the pandemic, infection in young people and children had been relatively mild, with complications rarely observed, the emerging evidence of PIMS-TS, myocarditis and pericarditis, and Long Covid altered the risk-benefit balance influencing decision-making regarding transmission and prevention of infection and advice by the Joint Committee on Vaccination and Immunisation and CMO vaccination recommendations.

Covid-19 specific Therapeutic and Implementation in NI

331. With the emergence of a number of therapeutic advances for Covid-19 and the increasing complexity of the various elements of the work involved including the need for a rapid system-wide approach to their deployment and implementation, the CPO and I established a Covid-19 Therapeutics Oversight Board in November 2021 given the need for oversight of the increasing availability of newly identified and available Covid-19 drug treatments and to ensure a consistent NI wide approach. I established and co-chaired this Board with the Chief Pharmaceutical Officer to set the overall strategic direction for deployment of novel Covid-19 therapeutics in Northern Ireland and oversee the development and implementation of a coordinated system-wide approach to deployment [Exhibit INQ000137366]. The operational delivery of the treatment of non-hospitalised eligible people was provided by the five HSC Trusts with regional coordination by the Health and Social Care Board (now SPPG) who

chaired the Covid-19 Therapeutics Operational Group. Between December 2021 and January 2023 over 16,000 people had been triaged for eligibility with over 6,300 individuals in Northern Ireland having received these treatments. The oversight board set the overall strategic direction for the deployment of novel Covid-19 therapeutics in Northern Ireland and oversaw the development and implementation of a co-ordinated system-wide approach to their deployment. The more operational aspects of the deployment were led and coordinated by the HSCB (now SPPG) with support from PHA. As described, I chaired the Oversight Board, with the Chief Pharmaceutical Officer acting as deputy chair to provide strategic leadership to what was a complex programme of work with a number of interrelated elements. This included the public communication with people who would benefit from treating, making arrangement for testing those people potentially eligible for treatment, clinical consideration of eligibility for treatment and subsequent administration of treatment. As described at paragraph 338 decisions of what therapeutics to be procured and deployed was considered at a UK DHSC Antivirals and Therapeutics Taskforce which included membership from NI with recommendations being made to UK CMOs for consideration and approval. Membership of the Covid-19 Therapeutics Oversight Board included relevant policy leads and key delivery partners from within the Department and HSC organisations. As described in paragraph 332 agreed UK-wide Interim Clinical Commissioning Policies were developed. These policies were developed by the National Clinical Policy Team at NHS England and Improvement, with input from relevant national expert groups and were updated as further guidance or evidence emerged. Any recommended revisions to patient eligibility by the national expert groups were considered by me and by UK CMOs. The Oversight Board met weekly until Christmas 2021 during the initial rollout of Covid-19 therapeutics and then monthly thereafter.

332. Given widespread global demand for emerging Covid-19 treatments, supplies available to the UK were limited. In NI we benefited from receiving a proportionate allocation of new medicines for the treatment of Covid-19 from stocks procured on a UK-wide basis by the Department of Health and Social Care (DHSC). Agreed UK-wide Interim Clinical Commissioning Policies were developed to ensure that access to these medicines was prioritised for patients

most likely to benefit from new treatments. These policies were developed by the National Clinical Policy Team at NHS England and Improvement, with input from relevant national expert groups and were updated as further guidance or evidence emerged. Recommended revisions to patient eligibility by the national expert groups were considered by UK CMOs. Officials from the Department attended UK-wide policy development meetings to ensure that Northern Ireland's interests were recognised and represented.

333. On 23 September 2021, the Department announced that a new treatment, Ronapreve, would be available for hospitalised patients with Covid-19 in NI. This was a new innovative treatment that combines two neutralising monoclonal antibodies (nMABs) Casirivimab and Imdevimab and was the first neutralising antibody medicine specifically designed to treat Covid-19 authorised by the Medicines and Healthcare products Regulatory Agency (MHRA) for use in the UK.

334. Ronapreve® was deployed within the HSC for the treatment of Covid-19 in hospitalised patients in line with an agreed UK-wide interim clinical commissioning policy. Guidance was communicated to healthcare professionals from the CPO and myself on 20 September 2021 to provide them with support to prescribe Ronapreve® as soon as possible. On 20 October 2021 the Department welcomed the announcement that the UK Government's Antivirals Taskforce had secured deals for the supply of two new antiviral medicines on behalf of the four UK nations in time for deployment before the end of 2021. Molnupiravir, manufactured by MSD, and PF-07321332/ritonavir, manufactured by Pfizer, would be made available to UK patients following authorisation by the MHRA.

335. The Department subsequently made an announcement on 9 December 2021 that there would be two routes to access new Covid-19 treatments for non-hospitalised patients. One was through Health and Social Care (HSC) Trust led Outpatient Covid-19 Treatment Service (OCTs) for patients at highest risk from Covid-19 infection and who met specific criteria for treatment. The other route was the PANORAMIC study which had been set up by the University of

Oxford to rapidly evaluate whether antiviral treatments helped people at higher risk of Covid-19 to recover sooner and prevent the need for hospital admission.

336. From 16 December 2021 access to monoclonal antibodies and antivirals as a treatment for Covid-19 was extended to include non-hospitalised patients aged 12 years and above, who tested positive for Covid-19 and were considered at highest risk of progression to severe disease, hospital admission or death having previously been used for patients hospitalised with Covid-19 infection. From mid-December 2021 to September 2023, more than 7,200 patients across NI have received neutralising monoclonal antibody (nMAB) and antiviral treatments at HSC Trusts' Outpatient Covid-19 Treatment services, or oral antiviral medicine to take at home.

337. The deployment of Covid-19 treatments to highest risk individuals was made possible due to the implementation of UK wide Interim Clinical Commissioning Policies. There were numerous updates to policy as new evidence was reviewed by a National Expert group of clinicians from all four UK nations commissioned by the Department of Health and Social Care in England and agreed by the 4 UK CMOs. Clinical policies were developed based on evidence that certain health conditions can make a patient much more likely to progress to severe disease.

338. Departmental officials regularly attended 4 nations meetings, including those led by DHSC Antivirals and Therapeutics Taskforce, to ensure NI engagement at UK level in decision making about therapeutic procurement and deployment, including with other Devolved Administrations. This continued engagement ensured that NI's views were represented at UK meetings and fed into decisions about Covid-19 therapeutics.

Clinical Research of effective drug treatments

339. In the first weeks and months of the pandemic no evidence-based therapeutic options such as drugs or vaccines were available, and there was uncertainty about which existing treatments should be prioritised for clinical trials or even

where research efforts should be focused to develop novel therapeutics and vaccines. Emerging evidence has informed guidance and clinical practice, alongside shared expertise as clinicians have developed and shared new ways to treat and support patients with Covid-19 through local groups and clinical networks.

340. At the onset of the pandemic, the World Health Organization (WHO) and drug regulators highlighted the experience from previous epidemics such as SARS-CoV-1 and Ebola virus in which a multitude of small trials had provided no meaningful new knowledge, or where unproven treatments were given to patients outside appropriately conducted clinical trials. They emphasised the need for a relatively small number of large, randomised trials comparing the effects of possible therapeutic options with usual care alone. This approach was followed in the UK and a jointly funded National Institute for Health Research (NIHR) and UK Research and Investment (UKRI) Medical Research Council (MRC) rapid call for research into vaccines and therapeutics was launched on 4 February 2020, 4 days after the first UK case. The strong existing research infrastructure in the UK was important for the rapid scale of Covid-19 specific research as all NIHR-supported non-Covid-19 studies was temporarily paused. As soon as was possible non-Covid-19 research was restarted although this proved harder than anticipated.

341. It was important that in the UK that the use of unproven medicines, such as for example as hydroxychloroquine, outside the setting of a clinical trial was effectively minimised given the need to rapidly develop evidence of effective treatments and the need to avoid potential harm. Following discussion as UK CMOs, we agreed that it was essential for respective health services and clinicians to prioritise recruitment to the highest priority clinical trials, and not to prescribe unproven off-licence drugs outside of properly conducted clinical trials. Consequently, we issued an early communication to clinicians in the form of a UK CMO letter 1 April 2020 [Exhibit INQ000408154]. While at the time this was controversial as clinicians had no proven Covid-19 therapeutics options in retrospect this was sensible and proportionate given the need to develop evidence on effective treatments.

Research into effects drug treatments for Covid-19

342. Normally early research into the treatment of a significant change, variation or mutation in a known pathogen is to determine whether existing medical treatments including drugs and vaccines are effective or can be adapted. However, with Covid-19 there were no known human specific treatments and therefore clinical research was vital in building knowledge of potentially effective treatments. Working from first principles, the choice of early drug trial candidates was informed by decisions to trial existing drugs with theoretical reasons as to why they might work. Most of this work was undertaken on a UK wide basis within clinical academic research in partnership with the health service while the rapid development of coronavirus-specific treatments occurred in the pharmaceutical industry such as ronapreve and sotrovimab both monoclonal antibodies [6] developed in the second year of the pandemic. At the time, it was expected that the trials of existing drugs would take many months, and the development of new drugs could potentially take years. The clinical trials of existing drugs occurred before the second wave peaked, and the most important studies proved to be those which altered the body's immune systems reaction to Covid-19. This included steroids and other drugs used to modify the disease response in rheumatologic conditions as opposed to specific antiviral drugs. More Covid-19 specific drug treatments took longer to develop. The development and testing of therapeutics and vaccines is covered in more detail in Chapter 9: pharmaceutical interventions of the UK CMO Technical Report 9 [see Exhibit **INQ000203933**].

343. Studies to develop a vaccine for Covid-19 started within weeks of the genotype (genetic make-up) of the virus being published. Clinical trial data supported the effectiveness of the vaccines that had been developed within 9 months and the vaccines themselves were available from the middle of the second wave of the pandemic in the UK. The extraordinary speed of the development and effectiveness of specific vaccines had not been anticipated given the normal

[6] identical laboratory produced antibodies produced from a single cell used in the treatment of various diseases

development timeline. This will be covered in my evidence to later modules of the Inquiry. The originally anticipated time frames for vaccine development did however add significant urgency to the need for trials to repurpose existing drugs that might be adapted to treat people with severe Covid-19 and improve clinical outcomes.

Prioritisation of research studies

344. There was an urgent need to identify effective treatments for Covid-19 and equally to identify drugs which were ineffective, of no benefit and could potentially cause harm as described in paragraph 353. There was a risk that priority research would not be undertaken because of the urgent need to act with individualised trials of therapy leading to unevidenced intervention with no conclusion to inform subsequent practice. Another risk was that of simultaneous multiple competing studies, none of which would recruit sufficient patients to provide a definitive answer in a realistic timeframe, with such research occurring only in teaching hospitals with an established research base and a prioritisation of new treatments over existing treatments that could be rolled out more quickly if effective.

345. There were many potential questions to answer particularly in the earliest months about the pathogen, the disease, their impacts, and possible effective interventions all of which required prioritisation. UK wide multidisciplinary panels and committees were established to drawing on a range of scientific expertise. For example, the 'Urgent Public Health' (UPH) badging panel which was activated in January 2020 to determine the most important Covid-19 research for priority funding and resource. Again, this is covered more fully in Chapter 9 of the UK CMO Technical Report: pharmaceutical interventions [see Exhibit **INQ000203933**]. Further examples included the National Institute for Health and Care Research (NIHR), the Medical Research Council (MRC) and this was supported by the 4 UK CMOs and national clinical directors. These panels directed resources to a limited set of studies considered of national importance and could take account of international panel views of priorities such as those

convened by the World Health Organization (WHO). When established, the Covid-19 Therapeutic Advisory Panel collated expert views on which drugs to bring into large scale clinical trials to get answers on the most promising drugs treatments and to maximise trial capacity.

346. To assist in ensuring clarity on research priorities and to ensure that prioritised research was conducted efficiently and effectively and making best use of and adapting existing research arrangements, infrastructure and processes, as described in paragraph 355 below, I agreed with my CMO colleagues that we should communicate with doctors and researchers. A UK CMO letter to clinicians was issued on 1 April 2020 supporting the UPH badging process for clinical studies and asked the health service to prioritise recruitment to UPH trials, and not to prescribe off-licence drugs outside of trials [Exhibit INQ000068589]. As UK CMOs we also agreed to support recruitment for priority trials in the health service by writing to doctors to encourage patient recruitment and enrolment and by mobilising the researchers in April and May 2020 [Exhibits INQ000068589 and INQ000069095].

The RECOVERY trial

347. The RECOVERY trial was established in March 2020 by UK Research and Innovation (UKRI), the Medical Research Council (MRC) and the National Institute of Health Research (NIHR) and was the UK's major platform trial for repurposed therapeutics. As a platform trial it allowed for multiple study arms to simultaneously evaluate many drugs with the flexibility to add new drugs and to compare these to the control group which received standard treatment. The control group itself could also be updated throughout the study as standard treatment evolved. It was the world's largest clinical trial into treatments for Covid-19, with a joint investment of £2.1 million, led by the University of Oxford and had more than 40,000 participants across 185 trial sites in the UK including in NI.

348. The trial started recruiting patients within six weeks of funding and provided important evidence of effective treatments including confirming one of the world's first Covid-19 treatments dexamethasone. The recovery study identified effective repurposed drugs for the treatment of Covid-19 including tocilizumab and sarilumab, drugs used in rheumatoid arthritis to reduce the immune response and associated damage. As importantly it also confirmed those treatments with no clinical benefit such as hydroxychloroquine, lopinavir-ritonavir, aspirin, colchicine, antibiotics such as azithromycin also known to reduce inflammation and convalescent serum from patients recovering from Covid-19 infection.

349. One of these, Hydroxychloroquine and chloroquine had received a lot of social media attention in early 2020 and was being used widely in some countries outside of the UK, mainly in the US and Latin America, to treat Covid-19 patients, despite the absence of any good evidence. On 4 June 2020, in response to a request from the UK Medicines and Healthcare Products Regulatory Agency (MHRA), the independent Data Monitoring Committee conducted a further review of the data. and recommended that the chief investigators of RECOVERY review unblinded data on the hydroxychloroquine arm of the trial. The chief investigators concluded that there is no beneficial effect of hydroxychloroquine in patients hospitalised with Covid-19. A decision was made to stop enrolling participants to the hydroxychloroquine arm of the RECOVERY Trial with immediate effect and the preliminary results were released immediately due to the important implications for patient care and public health.

350. A total of 1542 patients had been randomised to hydroxychloroquine and compared with 3132 patients randomised to usual care alone. There was no significant difference in the primary endpoint of the study with 28-day mortality (25.7% hydroxychloroquine versus 23.5% usual care; hazard ratio 1.11 [95% confidence interval 0.98-1.26]; p=0.10). There was also no evidence of beneficial effects on hospital stay duration or any other outcomes. These data convincingly rule out any meaningful mortality benefit of hydroxychloroquine in patients hospitalised with Covid-19.

351. By contrast just a few weeks later, the trial published further preliminary results. This time the resulted showed that dexamethasone, a low-cost steroid treatment, reduced deaths of hospitalised Covid-19 patients with severe respiratory complications by up to one third. Dexamethasone was the first drug to be shown to improve survival in Covid-19. One of the major advantages was that was immediately widely available worldwide. In an article dated 10 February 2021, it was estimated that between July and December 2020 dexamethasone could have saved the lives of approximately 12,000 (4,250- 27,000, 90% confidence intervals) in the UK and approximately the lives of 650,000 (240.000 – 1,400,000, 90% confidence intervals) Covid-19 patients globally [Exhibit INQ000408156]. In February 2021, new preliminary findings revealed that tocilizumab, an intravenous anti-inflammatory drug often used to treat rheumatoid arthritis, also reduces the risk of death for hospitalised patients with severe Covid-19 and reduced the need for a mechanical ventilator and shortened the time taken for patients to be discharged from hospital. In March 2022, the RECOVERY trial reported that baricitinib another anti-inflammatory drug normally used to treat rheumatoid arthritis reduced the risk of death by 13% when given to hospitalised patients with severe Covid-19 and also reduced the chance of needing invasive mechanical ventilation.

352. In my view, an important element of the success of the research and public confidence in the findings of that research was engagement with the public and media, along with informed discussion and debate of the coverage of research which had not previously seen prior to the pandemic. The sharing of emerging research evidence with open access and pre-prints widely available also allowed experts to review emerging evidence as soon as it was available and facilitated its interpretation and translation into scientific advice and improvements in clinical treatment.

353. While there was intense pressure on clinicians faced with seriously ill patient with to prescribe untested treatments with no evidence of effectiveness particularly early in the pandemic. The identification and communication of research objectives and priorities and the use of established research capacity and capability resulted in studies of sufficient size to provide results on effective

treatments thereby preventing more deaths. As importantly such studies also allowed the rapid identification of ineffective treatments and these were discontinued from further use.

354. Trials were set up as early as possible and in advance of the UK's first wave. Covid-19 clinical trials were embedded as a core component of the health service and routine care, with data collection and surveillance of patients continuing following treatment and discharge to capture incidence of long-term side effects and to monitoring for evidence of any emerging drug resistance where possible. Generally, the UK was stronger on phase 3 and 4 trials than on phases 1 and 2. The clinical trials infrastructure in the UK and the rapid enrolment of patients into trials even at the height of the pandemic provided essential evidence that improved clinical care in the UK and globally. From March 2020 to March 2021, the National Institute for Health and Care Research (NIHR) Clinical Research Network supported recruitment of over 1 million patients from across the UK into urgent public health studies.

355. NI repurposed research infrastructure and resources through the HSC Research and Development Division in the PHA to maximise clinical and patient participation in the main national Covid-19 research studies, in addition to funding some additional research of NI specific relevance. Both secondary and primary care participated in studies, and NI recruitment exceeded expectations in many cases based on population size.

356. In a statement on 25 May 2022, the Health Minister welcomed the UK-wide plan, 'The UK wide Recovery, Resilience and Growth programme for Clinical Research', led by the Department of Health and Social Care to ensure successful delivery of future research across all areas of health and social care. In March 2020, many clinical research studies were paused to focus on research into Covid-19 treatments and vaccines. A specialist taskforce was established in March 2021 to develop a plan specific to NI. The taskforce included representatives from the HSC Trusts, NI research infrastructure, industry,

Queen's University Belfast and Ulster University. This plan has now been published [Exhibit INQ000348907]. The plan recommended a series of actions to support recovery, resilience and growth in health and social care research in NI. The actions should lead to improvements in the effectiveness and efficiency of this research helping to ensure that the research will influence future decisions that will improve health and wellbeing and prevent premature deaths. It will allow health and social care to build on research expertise in NI and the willingness of patients and the public to participate in the planning and delivery of research and provide them with opportunities to do so.

Independent Sector Hospitals

357. During the pandemic under the Health Gold arrangements the HSC developed contracts to utilise all available Independent Sector hospital theatres and bed capacity for the pandemic response. On 19 March 2020 I understand a meeting was held between the Health and Social Care Board (HSCB) Director of Commissioning, senior managers and representatives of the Independent Sector (IS) hospitals to discuss surge planning in the emerging Covid-19 situation. I was not directly involved in these discussions. Colleagues in the HSCB (now SPPG in the Department) will be best placed to advise and provide detailed information about the arrangements with the Independent Sector.

358. The responsibility for the redeployment of HSC elective care staff to increase critical care capacity which resulted in the cancellation or postponement across all Trusts of non-urgent appointments, investigations and procedures across outpatients, day case, inpatient and diagnostic services was an operational responsibility for HSC Trusts to manage and for the HSCB to capture and monitor with respect to their responsibility for performance management of HSC services. I was not involved in these decisions and provided no professional advice on operational matters of this nature. To help increase elective care capacity and mitigate the most severe impacts of this, the Health Minister, in his opening Statement [see Exhibit INQ000130411] to the Assembly's Ad Hoc Committee meeting on 15 April 2020, informed members that HSC Trusts were accessing Independent Sector hospitals to treat urgent, non-Covid 19 patients across a

number of elective specialties. It was expected that 120 to 135 procedures would be carried out per week across a range of red flag and urgent cases. Detailed information about the arrangements with the Independent Sector would most appropriately addressed to, and best provided by the HSCB (now SPPG within the Department). I did not provide, nor would it be appropriate for me to provide any key directions in relation to the cancellation or postponement across Trusts of non-urgent appointments, investigations and procedures across outpatients, day case, inpatient, and diagnostic services. As an operational issue, Health Silver was coordinating this activity and capturing any reporting. I was not asked to provide any professional advice or direction. Given the extent of the downturn this was mainly an operational response for the HSC. Colleagues in the HSCB (now SPPG in the Department) would be best placed to provide further information and details of urgent cases and red flag procedures carried out in the Independent Sector.

359. While I had no direct involvement, I understand that the HSCB (now SPPG within the Department), on behalf of itself and five HSC, Trusts entered into contracts with the Ulster Independent Clinic, the North West Independent Clinic and Kingsbridge Private Hospital between 1 April 2020 and 29 June 2020. These contracts were agreed on a not-for-profit full cost recovery basis and provided HSC Trusts with full access to the Independent Sector hospital facilities at certain specified premises.

Treatment and Capacity

360. The capacity was primarily used to support the continued delivery of urgent cancer diagnostics and treatment [see Exhibits INQ000426780 and INQ000376995], but HSC Trusts also accessed the Independent Sector hospitals to treat urgent non-Covid patients across a number of elective specialties including breast surgery; maxillofacial surgery; urology procedures; general surgery, and ophthalmology. Prior to Covid-19 Trusts would have sent patients directly to the Independent Sector providers for assessment and/ or treatment. Trusts operated and monitored these contracts and payment would have been made on a cost per case basis. While I have considered, I am not able to assess

whether or not HSC Trusts made full use of pre-existing contracts with Independent Sector providers during this period as this does not relate to or fall within my policy and professional responsibilities as CMO. Colleagues in the HSCB (now SPPG) may be better placed to provide detail information and advise the Inquiry on this.

361. In a written statement on 8 January 2021, the Minister informed the Assembly that he had approved the establishment of a new regional approach to ensure that any available theatre capacity across NI was allocated for those patients most in need of surgery. The pandemic presented a number of operational challenges for HSC Trusts and managing the clinical risk associated with the reduction in operating capacity required a regional approach to ensure that theatre capacity was prioritised for those patients with the greatest clinical need. To address this risk, Ministerial approval was given in January 2021 for the HSCB to implement a regional process for the allocation of the limited available HSC in-house and Independent Sector capacity, based on clinical priority irrespective of postcode. The planned approach for the allocation of the available capacity responded to the need to significantly downturn all services, in response to staff absences and the expected increase in bed occupancy levels, as indicated in the inpatient and ICU modelling projections at that time. This was an issue considered by the Covid-19 Integrated Gold Command and the Rebuilding Management Board. I was not directly involved in these considerations although the principle was in my view sound. It is my understanding that the Regional Prioritisation Oversight Group (RPOG) was established in January 2021 I understand this group was established to ensure that the relative clinical prioritisation of time critical/urgent cases across surgical specialties and Trust boundaries was consistent and transparent and to ensure the utilisation of all available capacity was fully maximized (see Exhibits INQ000373997 and INQ000381768).

361.1 While not directly involved I was aware that HSC Trusts submitted weekly prioritisation data by close of play each Friday to the Performance Management and Service Improvement Directorate of the HSCB and an analysis by specialty and HSC Trust was undertaken in advance of the weekly Regional Prioritisation

and Oversight Group meeting. It is my understanding that this data helped identify emerging pressures and allowed for early interventions, including inter-HSC Trust transfers or increased access to theatre capacity both inhouse and in the Independent Sector. Examples of co-operation included: the provision of all day theatre lists in the South West Acute Hospital, located in the Western HSC Trust hospital at Enniskillen, for the Belfast HSC Trust red flag gynaecology patients; provision of regional urology lists in Craigavon Area Hospital, Southern HSC Trust; and inter-Trust transfers of colorectal, urology and breast patients. An update paper was provided to the HSC Rebuilding Management Board on 19 May 2021 [Exhibit INQ000276350]. I had no involvement in the establishment of this group, nor can I provide a view on how effective it was in ensuring the utilisation of all health service capacity to ensure the regional prioritisation of time critical or urgent treatment of people requiring specialist surgical services. Colleagues in the HSCB (now SPPG) in the Department will be best placed to advise of the rationale for the timing of the establishment of this group and its effectiveness.

362. In an oral statement on 13 April 2021, the Minister updated the Assembly on the HSC Trusts' immediate plans for rebuilding HSC services [Exhibits INQ000276353, INQ000276354, INQ000276355, INQ000276356, INQ000276357, and INQ000276358]. The plans, which covered the three months period for April to June 2021, were also published on 13 April 2021. The publication of the HSC Trusts' Rebuild Plans came as NI emerged from the severe second Covid-19 wave. The Plans were based on the following five principles:

- de-escalate ICU as a region (i.e., critical care surge plans and escalation processes were used to increase critical care beds across NI to meet demand coming into the system. This was achieved in a planned way with beds increasing on a daily / weekly basis in line with the surge plan. When critical care demand reduced a de-escalation plan and process was put in place which reduced the number of critical care beds in the region in a planned way.

The plan was reviewed daily and adjusted accordingly based on demand changes.);

- enabling re-deployed staff to be afforded an opportunity to take entitled annual leave before returning to their posts;
- ensure that elective care was prioritised regionally to ensure that those patients classified as being in the most clinical need received their surgery first, regardless of place of residence;
- all HSC Trusts to seek to develop green pathways with the aim to maximise theatre throughput;
- the Belfast City Hospital Nightingale facility to be prioritised for ICU de-escalation. As most of the major complex cancer surgery is carried out in the Belfast City Hospital, it was agreed that the Belfast City Hospital Nightingale unit would reduce critical care beds ahead of other units, this would allow the theatre nurses working in critical care to be redeployed back to main theatres to increase regional complex surgery capacity as quickly as possible.

362.1 The use of Independent Sector hospitals provided valuable additional assessment, treatment and theatre capacity during the pandemic, at a time when Trust hospital theatres were operating at very reduced capacity. Thousands of urgent patients with life-threatening or time-critical conditions were scheduled for treatment in these "green site" hospitals who – a reference occasional used to distinguish "non-Covid" health facilities used for elective care from those treating people with Covid-19 - would otherwise have had reduced access to surgeons and theatre teams and would not have received treatment as quickly as they did. Trust service managers had responsibility for coordinating and scheduling these urgent patients through the three hospitals. As part of efforts to rebuild services, the Rebuild Management Board (RMB) agreed on 17 February 2021 to five principles for critical care de-escalation and elective care rebuild. Principle 4 requested that all Trusts seek to develop green pathways, with 'green' in this context meaning that every effort would be made to keep the services entirely separate from any exposure to Covid-19 by ensuring complete separation of elective and unscheduled services. Principle 5 requested that Belfast Nightingale

de-escalation should focus on increasing regional complex surgery as quickly as possible, focusing initially on the development of green pathways, with the aim for BCH ultimately to become a green site serving the region. With these principles endorsed by RMB and approved by the Minister [Exhibit INQ000276361] on 17 February 2021, it would have been for Trust Chief Executives, who sat on the Board, to ensure that the principles were communicated and implemented in each of their Trusts.

363. No ICU bed capacity was registered with the Regulation and Quality Improvement Authority (RQIA) in any of these hospitals. The three independent hospitals provided a combined total of 112 inpatient beds, recovery areas, day case bed space and outpatient space. The original contracts with these hospitals defined the bed capacity as that registered with RQIA, i.e. to record that the HSC had access to all the registered bed capacity in exchange for full cost recovery.

364. The capacity provided by the Independent Sector hospitals supplemented the capacity of the HSC and allowed more time critical patients to be treated. Thousands of patients were assessed and treated in the independent hospitals over the period with a focus on oncology patients but also in a number of other specialties listed above.

Mutual Aid and Transfer of Patients to England

365. Given the geographical location of Northern Ireland, the health service in NI required the services of an air ambulance provider for the transfer of patients to and from specialist centres in Great Britain. The existing designated fixed wing air ambulance provider for Northern Ireland is Woodgate Aviation but due to the layout of their aircraft, which had no separate cabin area, Woodgate were unable to provide Air Transfers for Covid-19 positive patients due to IPC requirements. Therefore, early in the pandemic, in April 2020, and in response to the need to transfer patients to Great Britain, by air, the Department through CMOG, on request from the HSCB arranged for patient transfer by RAF assets (Military Aid

to the Civil Authority - MACA). These MACA arrangements were made in line with the MACA UK protocol that was published on 4 August 2016 [see Exhibit INQ000390021].

366. As described at paragraph 264, this arrangement was intended for specific cases that were not eligible for transfer by other commercial arrangements including patients being transferred to specialist centres in England for Extracorporeal Membrane Oxygenation (ECMO) treatment that is not available in Northern Ireland. The population in NI is too small to safely and sustainably provide ECMO. The arrangements were also available for use where patients with Covid-19 with other specialist needs required transfer to a specialist centre in Great Britain. In total nine patients were transferred from 27 April 2020 to 8 December 2021. The process for referral of patients requiring ECMO by HSC Trusts was via the NHS national referral portal.

367. Subsequently, in November 2020, as a first line of response, and following on from arrangements put in place by the Scottish Ambulance Service (who have responsibility for air transfers in Scotland), the HSCB put in place arrangements to access air ambulance services for the transfer of Covid-19 patients from Logan Air [Exhibits INQ000377024 and INQ000408159]. This arrangement involved the use of a modified passenger plane with a separate cabin for flight crew. This allowed the capability to transfer Covid-19 positive patients.

368. In August 2021 the then HSCB put in place a further arrangement with Her Majesty Coastguard Search and Rescue, via their UK Search and Rescue inter facility transfer procedure [Exhibit INQ000346766], to provide a further tier of support for air transfer, where Logan Air was unable to provide transport for Covid positive patients. In December 2021 Logan Air advised that it was no longer able to provide air ambulance transfer services for Covid positive patients, and, in January 2022, the Coastguard SAR became the first line of support to Woodgate Aviation. There has been no decision to stand down the existing arrangements for transfer of Covid-19 patients requiring access to specialist

centres, and, whilst no Covid-19 patient has been transferred since December 2021, this is still possible if required.

369. The existing designated fixed wing air ambulance provider for Northern Ireland is Woodgate Aviation and, although Woodgate remained available during the period, there was a reduction in the number of transfers undertaken due to the reduced availability of services elsewhere in the UK because of Covid-19.

370. During the period 1 March 2020 to 28 June 2022, to assist the Inquiry. I understand from information provided to me by colleagues in SPPG in the Department (previously the HSCB) the following transfers took place to and from Northern Ireland:

- 735 air transfers for non-Covid patients to and from Northern Ireland as part of the contractual arrangement with Woodgate Aviation. The range of conditions included patients travelling for transplant procedures (lung, heart, liver, bone marrow) and patients travelling for paediatric cardiac interventions as part of contracted arrangements with providers in England;
- 423 patients were transferred to and from Dublin as part of an All-Island Congenital Cardiac network arrangement for cardiac surgery or cardiac catheterization;
- 5361 commercial flight and ferry transfers for non-Covid-19 patients to and from Northern Ireland were booked via HSC NI Travel Agent Provider; and
- 9 patients were transferred to England for ECMO

Patient Safety and Oxygen Supplies

371. The Chief Pharmaceutical Officer led the medical supplies and medicines cell reporting to Health Gold which I chaired. The scope of this work included oxygen supply availability, oxygen system delivery capacities and related consumables. Modelling undertaken in March 2020 to inform the first Covid-19 surge plan [Exhibit INQ000439817] indicated that large numbers of patients would require high intensity treatments including oxygen therapy. In addition, it was anticipated that levels of cylinder and concentrator oxygen use in domiciliary settings would

also increase. While not directly involved, my understanding is that the modelling indicated the need to increase oxygen delivery capacity and resilience of supply in several site and this was addressed in advance of the surge in demand. Details of this additional work I am aware is addressed within the M3 Corporate Statement and associated exhibit which details the Department's led Covid-19 site assessment of anticipated oxygen supply and demand. [Exhibit M3 SG CMOG 01 and Exhibit M3 SG CMOG 02] Robust information was needed to assist planning to ensure the continuity of oxygen supplies, and this presented a number of challenges including:

- Calculating the likely patient demand in acute hospital settings, including an assessment of the available ventilator devices and type;
- Calculating maximal deliverable oxygen capacity across all hospital sites in the region;
- Assessing availability of oxygen therapy consumables including ventilator specific items;
- Assessing the number of oxygen concentrator devices and oxygen cylinder availability in community settings, and
- Reviewing the logistics of supply in community settings, including the prescribing and dispensing processes.

372. To meet these challenges a number of interlinked work-streams were progressed, and two regional groups were established to consider the likely acute hospital and community clinical demands. Coupled with this, mathematical modelling was used to establish the oxygen system storage and delivery capacity across Northern Ireland. This modelling sought to inform a hospital's maximum system delivery capacity of oxygen from its bulk storage systems and the resupply schedules to provide critical care and respiratory services for patients requiring enhanced respiratory support and high oxygen flow rates. The modelling indicated that the oxygen supply and storage system capacity at certain hospital locations might be insufficient to meet demand at times of peak demand and therefore action was taken to address this. The modelling subsequent work provided the necessary assurance on oxygen infrastructure and the capabilities at the main hospital sites to manage oxygen supply and demand in a "reasonable

worst case" scenario. This modelling informed the need for upgrades of the oxygen system infrastructure at a number of sites with the Department working with the HSC Trusts and the regional oxygen supplier, BOC, coordinating and authorising a prioritized regional work plan to enhance the oxygen system storage and delivery capacity for oxygen. Because of this work the following actions were implemented:

- The Department as described, working with the Health and Social Care Trusts and the regional oxygen supplier, BOC, coordinated and authorised a prioritised work plan to enhance Trust's infrastructure and capacity for oxygen supplies;

- The Department authorised additional investment in oxygen equipment and ventilator devices and a weekly report was produced in relation to oxygen concentrator installations and removals in community settings;

- Practice changes were implemented providing respiratory specialists the authority to sign the Hospital Oxygen Order Form and on 10 April 2020 the commissioning of BOC to install concentrators into nursing homes on a named patient basis, and

- At Trust level the medical gas committees, which included relevant pharmacy, clinical and estates staff, provided information to the regional Acute Oxygen Supply Working Group, ensured that oxygen safety alerts were considered, and appropriate action taken. Trusts were asked to ensure that clinicians and managers had clear communication channels with their estates teams in regard to oxygen systems and their capacity and that Trusts designate a member of staff with an appropriate level of authority to ensure clear decision making and close collaboration across the teams. Ongoing monitoring systems for oxygen usage in each Trust site matched to the actual and planned ventilator demand were established.

- As Chair of Health Gold, Strategic Cell, I authorised the additional investment in oxygen equipment and ventilator devices. Oxygen concentrator

installations and removals in the community setting were managed by BOC. Practice changes were implemented, which meant that respiratory specialists were provided with the authority to sign the Hospital Oxygen Order Form (HOOF) and on 10 April 2020 BOC was commissioned to install concentrators into nursing homes on a named patient basis.

373. As indicated at paragraph 371, at Trust level the medical gas committees, which included relevant pharmacy, clinical and estates staff, provided information to the regional Acute Oxygen Supply Working Group, which ensured that oxygen safety alerts were considered, and appropriate action taken. Trusts were asked to ensure that clinicians and managers had clear communication channels with their estates teams in regard to oxygen systems and their capacity and that Trusts designate a member of staff with an appropriate level of authority to ensure clear decision making and close collaboration across the teams. Ongoing monitoring systems for oxygen usage in each Trust site matched to the actual and planned ventilator demand were established. This permitted a Red, Amber, Green (RAG) rating of oxygen use at Trust level to be established and the reporting of RAG status of a Trust oxygen management as part of the Health Silver Command Delivery Confidence section of the daily SitRep to the Department's Gold command for a regional RAG assurance. As described at paragraph 237 and 371 as a consequence of all of this work I am not aware that there were any significant issues with oxygen supply being exceeded during the pandemic response. Specifically, the daily Gold sit-rep report included a YES/NO assessment of whether HSC organisations had sufficient oxygen supply available to meet their needs in the next 24 and 72 hours. The organisations included all Trusts, Northern Ireland Ambulance Service, Primary care and Community Services. I am not aware of any occasions when these assurances were not provided. In the event of an issue arising the organisations involved would have been required to provide a report with recommendations detailing the mitigating actions required for Gold Command to either note or approve.

374. The Department issued 3 safety letters related to oxygen safety during the period April 2020 to December 2020 reflecting national advice and actions required. These included:

- SSU20/02, Impact of the Use of High Flow Oxygen Therapy Devices including wall CPAP and high Flow Face Mask or Nasal Oxygen on Hospital Medical oxygen System [Exhibit INQ000346771];
- SSU 20/04 Monitoring of Oxygen Systems [Exhibit INQ000376962]; and
- SSU20/31 Oxygen Supply and Fire Safety [Exhibit INQ000346773 and INQ000376956].

375. The Department also received updates in oxygen issues through the Sit-Rep process These related to the management of oxygen supplies and capacity but there were no specific issues related to an individual's access to or use of oxygen or patient safety incidents reported – an example is provided in exhibit INQ000362345.

General Practice

376. Despite the significant challenges General Practices across Northern Ireland continued to provide treatment, care and support to patients throughout the pandemic through both face-to-face appointments and alternative remote consultation and directed to other relevant services as appropriate. A telephone first consultation approach allowed GP practices to provide services in line with infection control guidance and maintain the majority of GP services. I did not in role as CMO provide any direction or communication to General Practitioners in NI about how they should provide treatment, care and support to patients. The clinical care of patients remains the responsibility of individual General Practitioners. The performance of General Practitioner services is monitored by the General Medical Services Directorate within HSCB (now SPPG with the Department). While I have no direct involvement, I understand a GP Access Working Group was established in June 2022 to explore issues relating to rising demand and access to GP services and to develop a programme of work to help address these issues. The Working Group, which continues to meet, includes

representatives from the Department, Digital Health and Care NI (DHCNI) and General Practice.

377. Given the need to reassure the public that anyone with a health concern would be able to get an appointment and see a GP if necessary in September 2020, GP leaders in the then Health and Social Care Board, the Royal College of General Practitioners and the British Medical Association's NI General Practitioners Committee issued a joint statement reassuring patients that GP surgeries remained open but that patients may be being seen in a different way, including via phone or video, but that those who needed to be seen in person would be. They also wrote to Northern Ireland MPs, MLAs and District Councillors with a similar message – the letter to MLAs is provided [see Exhibit INQ000374200].

378. This was a message that the Department sought to reinforce. On 1 December 2020, the Department published a 'GP Mythbuster' [see Exhibit INQ000259560]. The statement noted that despite the challenges of infection control and social distancing measures, GPs have maintained vital primary care services, adapting to meet the demands of delivering these during a pandemic, including video consultations and enhanced telephony capacity to make it easier for many patients to get in touch with their GP quickly with GPs remaining committed to providing face-to-face care where this is needed.

General Practice Capacity

379. The management of Covid-19 in Primary Care resulted in many changes to General Practice across Northern Ireland. In March 2020, routine GP work was adjusted or suspended with some elements of the General Medical Service (GMS) GMS contract stood down. The Health Minister approved that the Quality and Outcomes Framework (QOF) activity and reporting be suspended. Enhanced Services activity was also significantly downturned, with no financial detriment to practices, to help ease the burden on General Practice and free up capacity to help manage the potential significantly increased demand [see Exhibit

INQ000346777]. QOF is a system designed to remunerate General Practices for providing good quality care to their patients and to help fund work to further improve the quality of health care delivered. QOF measures achievement (outcomes, not activity) against a range of evidence-based indicators (which are aligned to NICE guidelines), with points and payments awarded according to the level of achievement. Although voluntary, since its introduction in 2004, all practices in Northern Ireland have chosen to participate. Whilst QOF activity was suspended for payment purposes, GPs were still required to see patients as clinically appropriate. Enhanced Services are part of the General Medical Services contract arrangements. They are services that a GP practice may contract to provide that are beyond the normal scope of essential services or additional services which are designed around the needs of the local population. Enhanced services are delivered in accordance with specifications which require an enhanced level of service provision to that which a practice needs generally to provide in relation to that service or element of service. Enhanced Services are not mandatory, and GPs can contract to provide these if they wish.

380. The Department established an Infection Prevention and Control (IPC) Cell which was led by the PHA within its integrated Gold business continuity arrangements and policy advice was provided by the Department and Gold Command with regard to infection prevention control. GP Practices made individual decisions on how to manage patient numbers in their practices based on local risk assessment and the IPC principles issued by the Covid19 emergency planning structure. To allow for adequate social distancing, and to maintain effective infection prevention control measures, most practices took the decision, early in the pandemic, to reduce the number of people able to openly walk into GP premises. Collaboration between GP practices within federations, and the wider healthcare system (to include the Department, NIGPC, HSCB) was crucial to managing increased patient need/patient flow, reduced staff numbers and the need to separate face-to-face consultations for patients with symptoms of COVID-19 from other patients. For example, the establishment of Primary Care Covid-19 centres helped to safeguard primary care capacity and preserve essential GP services. By creating separate primary care-based provision for 'Covid' and 'non Covid' patients, this aimed to help General Practice to respond to patients' needs and

reduce the risks of cross contamination and infection. Advice on social distancing in what would often be crowded conditions in GP practice waiting areas meant that practices, based on an individual risk assessment, concluded that it was important to manage patient contact through controlled entry to their premises. As CMO I did not provide any advice to practices about how to manage patient numbers in their practices and I am not aware of any advice of this nature being issued by the Department. This was a matter out with my responsibilities and was as matter for the HSCB (now SPPG within the Department). Under the General Medical Services (GMS) Contract, there is requirement that the "contractor" as a general practice shall ensure that there are appropriate arrangements for infection prevention and control and decontamination. I understand that the the then HSCB signposted General Practitioner contractors to relevant nationally and regionally agreed Infection Prevention Control Guidance and policies as advised by the Regional Infection Prevention Control Cell chaired by the Public Health Agency. Any changes to these policies were communicated to all practices via email by the HSCB. It was then up to each independent GMS contractor to determine how to respond to this advice. The GP telephone first consultation process enabled patients to continue to seek medical advice from their GP for both routine and urgent problems with GPs determining the most appropriate approach to safely address the patient's needs. It was anticipated that this approach would prevent many patients attending their GP surgery if it was not necessary to do so and help prevent the spread of infection. General Practice also worked with community pharmacy to enable repeat prescriptions to be collected.

381. Without the telephone first system in my view it would not have been possible to maintain GP services during the pandemic and despite the demands and capacity limits that Covid-19 created, GPs maintained most General Practice services.

382. It was recognised, however, that some patients were experiencing problems in getting through to their GP practice and the frustration this caused. In 2020/21, non-recurrent funding of £1.7m was made available through a GMS Telephony Grant Scheme to enable appropriate telephony and technology to be in put place

to support the change in operating model and to help improve demand management, capacity and access to General Practice. Practices could use funding towards purchasing new telephone systems and increasing the number of telephone lines into their surgery, with specific emphasis on making telephone lines available for staff in nursing homes, pharmacies and laboratory services in the local Health and Social Care Trust areas. In 2020/21, 277 Practices (out of 321) availed of the scheme. GP practices moved to a telephone first model which helped to free up resources and support capacity to maintain GP services. GP Practices have a responsibility to ensure that patients have clear information on how to access their services, making reasonable adjustments for specific groups eg those with hearing impairment, when necessary. I am not aware of any data held, analysis or research by the Department or the HSCB which assessed whether the change in operating model for General Practice services caused or exacerbated any inequalities.

383. In October 2021, the Department made available a £5.5million investment package for General Practice. Of this, £3.8m was committed to support additional patient care through facilitating additional clinical consultations over the winter and supporting the Out of Hours Service. Up to £1.7m was made available through a Telephony Grant Scheme to further improve telephony infrastructure and improve accessibility to GP services using online systems for ordering repeat prescriptions, helping to free up telephone lines and staff time.

384. This further funding for telephony, which was in addition to the £1.7million in 2020/21, would help GP Practices have appropriate telephony services to manage activity, improve demand management, capacity and access; maximise General Practice telephony functionality; and ensure additional staffing hours during peak practice times to manage telephony demand effectively. In 2021/22, 287 Practices (out of 319) availed of the scheme. Announcing the additional investment, the Health Minister noted that work was underway on several fronts to help improve access to primary care services for patients, including how telephony could be better used to support services [see Exhibit INQ000348853].

385. Primary Care's response to the Covid-19 pandemic accelerated the implementation of new and innovative ways of working, including making greater use of technology and telephony, which helped General Practice to react quickly and adapt flexibly to the demands and challenges of the pandemic.

386. As well as GPs, other members of practice staff, such as General Practice Pharmacists and practice nurses, were also a key part of the response of Primary Care to the pandemic. In those GP Federation areas where there were Primary Care Multi-disciplinary teams, those staff also played an important role in providing patient care and support.

387. The establishment of Primary Care Covid-19 centres also helped to safeguard primary care capacity and preserve essential GP services. By creating separate primary care-based provision for 'Covid' and 'non Covid' patients, this aimed to help General Practice to respond to patients' needs and reduce the risks of cross contamination and infection. Analysis of the number of patients assessed in Covid-19 centres as described at paragraph 394 showed that between 6 April 2020 and 20 March 2022, Covid-19 centres reported almost 68,000 patients had attended and been assessed. In my view these centres were effective in helping to maintain primary care for "non Covid" patients and in addition alleviated pressure on Emergency Departments in HSC Trusts. Regular updates were provided by the HSCB to the Rebuild Management Board covering all aspects of Primary Care.

Primary Care Covid-19 Centres

388. The establishment of Primary Care Covid-19 centres was a GP-led innovation that was an urgent and immediate response to the challenges posed by the Covid-19 pandemic. The centres ensured that primary care services were able to be maintained by enabling patients with Covid-19 symptoms to be treated separately from those patients who had other conditions which required assessment or treatment in primary care.

389. Leaders in general practice from across Northern Ireland played a key role in the design, implementation and ongoing management of the centres. Representatives from the Department, the then HSCB, the British Medical Association's (BMA) NI General Practitioners Committee and the Royal College of General Practitioners NI took forward the planning for the Primary Care Covid-19 centres, working intensively from 18 March to 25 March 2020 to establish the network [see Exhibit INQ000120726]. The first Centre opened at Altnagelvin Hospital on 25 March 2020 with the network of Covid-19 centres fully up and running by Thursday 9 April 2020.

390. The NI General Practitioners Committee and the Royal College of General Practitioners NI were represented on the Project Board, chaired by the Head of General Medical Services within the then Health and Social Care Board, that oversaw the running of the centres, with staffing of the centres managed locally by GP Federations in line with demand.

391. The centres provided services for patients symptomatic of Covid-19, and who were at higher risk of complications, or those described as having moderate or severe symptoms, and who required clinical assessment. The Covid-19 centres provided virology testing for healthcare workers who were symptomatic or suspected of having Covid-19; clinical assessment of suspected Covid-19 patients upon referral from their GP practice or GP Out of Hours service; reviewed suspected Covid-19 patients, if required in the Centre or at home or elsewhere in the locality; provided access to Secondary Care input/protocols to help with decision making regarding the management of patients' treatment including making the arrangements to transfer patients for inpatient care when appropriate; ensured that arrangements were in place for the supply of any urgently required medicines; provided access to Social Care for patients unable to be managed at home but who were not ill enough for admission to hospital; and referred patients to Covid-19 Palliative Care resources if required.

392. An arrangement was agreed that practices would engage in their share of Covid-19 centre rotas after negotiations with GP representatives that also saw the standing down of elements of the GMS Contract with no financial detriment to

practices as noted above. A small number of GP practices expressed concern about participation in the Covid-19 centres, noting the impact this might have on their own practice's resourcing and/or because they felt they were able to implement bespoke arrangements in their own practice to be able to separate 'Covid' and 'non-Covid' patients. The Department sought to reassure those practices that there was a need for GPs to support the Covid centres in order to ensure that those patients who were Covid symptomatic could be quickly and safely assessed [see Exhibits M3-HPG-PCD005 and INQ000346743]. The Department followed up with individual GPs/practices as necessary.

393. GPs worked with their local GP Federation to ensure appropriate staffing cover for Covid centres was maintained in response to local demand. As the rate of infection fell and vaccination rolled out, the requirement on GPs participation reduced, with the ongoing Covid vaccination programme and the easing of restrictions.

394. General Medical Services for patients at risk from Covid-19 evolved towards being managed by GP and practice teams where this could be done safely. By March 2022, the need for Covid centres had diminished substantially and the remaining 2 operating sites closed at the end of March 2022 [see Exhibit INQ000348855]. Between 6 April 2020 and 20 March 2022, Covid-19 centres reported almost 68,000 patient contacts.

Medicine Supply

395. Medicines are part of complex global supply chains in which shortages can occur for a variety of reasons unrelated to the pandemic, such as manufacturing issues, access to raw ingredients, batch failures and regulatory intervention. This can sometimes lead to shortages of medicines that require UK-wide management, as well as local collaboration across health and social care to help mitigate the risk affecting patients.

396. The Department of Health and Social Care (DHSC) Medicines Supply Team has overall responsibility for maintaining the continuity of medicines supply to the UK

and leads on the identification and management of medicines shortages issues, working in partnership with officials in the Department of Health in Northern Ireland and the other UK administrations to ensure co-ordinated management of medicines supply issues across all parts of the UK.

397. In August 2018, DHSC established a Medicines Supply Contingency Planning Programme to work with the pharmaceutical industry to mitigate against risks to the continuity of medicines supply arising from EU Exit. Medicines supply chains are UK wide and so engagement was based on securing supplies for the whole UK. From August 2018 Departmental officials worked collaboratively with DHSC officials to represent Northern Ireland's interests in the Medicines Supply Contingency Planning Programme, including sharing information relating to HSC medicines usage and engagement in regular information sharing update meetings led by DHSC officials.

398. Working closely with the pharmaceutical industry, a multi-layered approach to continuity of supply was implemented at UK level including stockpiling approximately 6 weeks' worth of medicines and medical supplies, supporting trader readiness for new border checks, rerouting shipments away from the English Channel short strait crossings, securing additional freight capacity, and developing enhanced UK-wide arrangements for managing medicines shortages.

399. The DHSC Medicines Supply Team is supported by a clinically led UK Medicines Shortage Response Group (MSRG) which was established in January 2019 as part of enhanced national arrangements established to monitor the medicines supply chain, identify issues and manage shortages that arise. The MSRG was established in January 2019 and has met fortnightly since then, with additional ad hoc meetings called if urgently required. MSRG leads on the management and escalation of high impact shortages and provides guidance on communications to the health service across the UK with actions to mitigate the impact on patients. Northern Ireland interests are represented on this group by the CPO's team and the NI Medicines Shortages Team based at the Regional Pharmaceutical Procurement Service in Northern HSC Trust.

400. As part of enhanced shortage management arrangements established as part of EU exit preparedness, a Northern Ireland Medicines Shortages Advisory Group (NIMSAG), which includes Departmental officials and HSC pharmacy leads, was also established by the Department in September 2019 to ensure that the HSC in Northern Ireland is positioned to influence and act on local, regional and national shortages and to communicate any associated actions to the HSC in a timely fashion to ensure implementation at pace. NIMSAG has met on a fortnightly basis aligned with meetings of the UK MSRG.

401. The Covid-19 pandemic posed many new risks and challenges with some medicines coming under considerable pressure during the first wave as suppliers attempted to keep up with international demand particularly medicine used in critical care settings, end of life care, and antibiotics.

402. A range of measures were taken at national level led by DHSC to maintain supplies of these medicines and manage medicine shortages during the peak of the pandemic, including: banning parallel exports of these medicines, setting up new NHS sourcing teams to source as much of these drugs as possible; working to track down additional sources of supply around the world; setting up new processes with wholesalers to manage distribution of key medicine; new processes of tightly controlled allocations to Trusts across the UK based on their actual daily needs; publishing general guidance (developed with Royal Colleges) on alternative products and further clinical guidance on how to make supplies last longer, and issuing a Supply Disruption Alert to the NHS on managing shortages of specific products.

403. This extensive range of actions ensured that while the availability of individual products used in critical care settings for the management of Covid-19 patients fluctuated, particularly during the first wave of the pandemic, the clinical needs of patients continued to be met by alternative products. Despite this, additional measures were required to be progressed following the first wave of the pandemic to provide further assurance to the Minister and Health Service that sufficient supplies of critical medicines were available for the treatment of Covid-19 patients in the event of a further peak of the pandemic [Exhibit

INQ000469805. There were instances when some parts of the UK came uncomfortably close to stock outs of medicines, however the Department provided advice to HSC organisations in the form of Supply Disruption Alerts, advising on the management of existing stocks and the need to switch to the alternative products [Exhibit - INQ000469806 and Exhibit - INQ000469807] To mitigate against this risk, the Department participated in UK-wide arrangements from July 2020 led by DHSC for the procurement and stockpiling of critical medicines to mitigate against the likelihood of medicine shortages should there be a further Covid-19 surge. These medicines included products used in end of life care, antibiotics, and supportive medicines used in critical care settings for sedation and maintenance of mechanical ventilation.

Testing for Health Care Workers and the role of the Chief Medical Officers Group

404. I requested the establishment of the Expert Advisory Group on Testing (EAG-T) which was approved by the Health Minister. To my recollection this was not presented in a formal submission to the Health Minister although the Covid Testing Strategy of 6 April 2020 [Exhibit INQ000103649] was cleared by Minister [Exhibit INQ000469792], and confirms that the Health Minister established EAGT at para 2.2. This was led at Director level within the PHA to develop the NI approach to Covid-19 testing and to oversee and coordinate the implementation of testing. This group considered and developed recommendations to the Department on all aspects of Covid-19 testing including the testing of healthcare workers and community testing. The Department presented its Covid-19 Testing Strategy [Exhibit INQ000103649] to the Executive on 6 April 2020 and presented an updated version on 21 May 2020 [Exhibit INQ000103650]. The updated Strategy set out how testing capacity had expanded and was being used on a prioritised basis.

405. The Covid-19 Testing Strategy published in May 2020 explains that Ireland followed a similar approach to the 5 pillar approach outlined for England. The Covid-19 Testing Strategy was supported by an Interim Protocol for Testing (IPT)

for Covid-19 [Exhibit INQ000120705]. The IPT was an operational tool which provided information on eligibility for testing and advice on how to access testing. The IPT was kept under continuous review with priority groups for testing extended regularly in line with emerging scientific evidence and with expansions in testing capacity. One of the key roles of the EAG-T was to make recommendations for updates and amendments to the IPT, taking account of the evolving national clinical and scientific understanding and evidence base, and developments in the other UK nations. The EAG-T recommendations were then presented by CMOG testing policy teams to myself for consideration and approval. Where appropriate, this included input from the CSA and DCMOs. In total 10 IPTs were produced and approved by the Department between 19 March 2020 and 6 October 2021. Decisions in NI on the testing of Health Care Workers were informed by the recommendations of the EAG-T to the Department. The consideration and recommendations of EAG-T and the testing policy team took account of the approach to testing in England and in Scotland and Wales. There were many changes to testing policy throughout the pandemic. It is difficult for me to state definitively that a systematic analysis of each country's position took place and documentation retained each time testing policy was updated or amended as contemporaneous records may not exist in call cases. The first version of the Interim Protocol on Testing dated 19 March 2020 set out priority groups for testing. Healthcare workers prioritised for Covid-19 testing included those who were providing frontline patient facing clinical care [Exhibit INQ000120705]. The Interim Protocol on Testing was kept under continuous review with priority groups for testing extended regularly – including greater testing of healthcare staff - in line with emerging scientific evidence and with expansions in testing capacity. For example, the second version of the IPT dated 26 March 2020 further extended Health Care Worker testing to include: Nurses and Allied Health Professions involved in the care of acutely ill patients; frontline staff in the community; and other Health Care Workers or critical staff considered on a case-by-case basis at the discretion of the Medical Director in each Trust [Exhibit INQ000362314]. When the updated Covid-19 Testing Strategy was published on 21 May 2020, testing was available to all Healthcare Workers who were self-isolating and for their symptomatic family members causing the isolation; rather than only select groups of healthcare workers as was the case in

previous IPTs. This expansion was set out in IPT Version 4 dated 4 May 2020 [Exhibit INQ000469808]. In April 2020, the National Testing Programme, established by the Department of Health and Social Care (DHSC) on behalf of all UK countries, was introduced in Northern Ireland to further support the testing of Health Care Workers, other key workers and symptomatic people. This included access to testing at test centres and to home testing kits for key workers who are unable to get to a centre.

405.1 From 13 May 2022, CMO HSS MD letters setting out Covid-19 Testing Guidance to Support Clinical Pathways replaced the IPTs. The approach evolved and developed as testing capacity increased and the availability of new technology such as the development of Covid-19 antigen tests for workers in healthcare settings.

406. The Department's EAG-T had open communication and engagement with the National Testing Programme led by the Department for Health and Social Care in England. This programme aimed to significantly increase testing for Covid-19 of people across the UK who were asymptomatic (those who did not have any symptoms of infection). This was a rapidly evolving and expanding testing programme and was undertaken using new and emerging testing technologies, such as Lateral Flow Device (LFD) and Loop-mediated Isothermal Amplification (LAMP) testing, which were validated at both national and local level before being deployed for testing asymptomatic people across a range of settings, including frontline healthcare workers.

407. As with testing programmes across all 4 UK nations, testing strategies in NI evolved as new technologies became available and as evidence emerged on the potential needs, use in suspected and asymptomatic cases and population responses to different testing options. The latter included considerations such as self-testing, as opposed to testing undertaken by a health professional or in clinical settings only, or accessibility of testing in public testing centres. Testing evaluation initiatives were important throughout the pandemic response in understanding this and to help shape policy. Updates to the IPT for Covid-19 took account of opportunities presented by these new testing technologies. As

such, a range of testing technologies were used including polymerase chain reaction (PCR), LFDs, LAMP and Lumira DX, after careful consideration and as deemed appropriate across different healthcare settings.

408. In NI regular testing of asymptomatic patient-facing staff was an essential element of our strategy to reduce transmission of the SARS-Cov-2 virus in the community and to mitigate the risk of healthcare acquired Covid-19 infection. On 9 November 2020, England announced that LFD tests would be made available to all patient-facing NHS staff, beginning in 34 NHS Trusts before being rolled out to the wider NHS. On 11 December 2020, the Department's Expert Advisory Group on Testing (EAG-T) considered a proposal for asymptomatic testing of HSC staff [Exhibit INQ000469793]. That paper sets out some detail regarding the programme of testing in England including that: "The tests are self-administered and used at home. Each staff member is issued with a box of 25 Innova lateral flow test kits. This use is outside of the manufacturer's instructions for use (use in symptomatic individuals and test to be administered). MHRA agreement and approval from the NHSEI National Incident Response Board were sought to allow this to occur". The minutes of the 11 December 2020 EAG-T [Exhibit INQ000437625] include that: "The possibility of using LFDs for HCWs in NI was viewed as favourable by EAG. In practice it will provide security and peace of mind for staff. EAG agreed that it would be prudent to wait on further feedback on quantity and quality of tests used in England….". Subsequent EAG-T meetings noted the importance of this regular testing. The overarching programme of regular, asymptomatic testing of patient facing staff using LFDs then commenced, initially as pilot exercises which first started on 22 January 2021. This programme of regular, asymptomatic testing using LFDs was as an additional measure alongside the full suite of public health measures, control and practices in place already at that time including guidance for testing and isolation of healthcare workers with symptoms; appropriate use of Personal Protective Equipment; ensuring adherence to good hand hygiene guidance; compliance with guidance on social distancing, and the suite of other robust infection prevention and control measures in place in healthcare settings.

408.1 Previous to that, there was some asymptomatic testing of patient facing staff in certain discrete areas. This included:

- Version 6.1 the Interim Protocol for Testing dated 23 July 2020 [Exhibit **INQ000469795** requirement for regular testing of staff working in specialities with vulnerable patients (for example, oncology and haematology) with staff tested regularly if there was evidence of nosocomial spread of infection in the unit.
- Regular testing was also advised for staff working in any clinical setting where there was evidence of nosocomial infection.
- Testing in the Belfast Trust using the new LAMP technology. There was a pilot undertaken in the Belfast Trust in December 2020 using LAMP testing technology to test asymptomatic staff. The pilot commenced initially with 260 registered participants. This was delivered under the auspices of EAG-T with delivery partners PHA working with the Trust and Queens University Belfast. Following the pilot, the LAMP programme was rolled out in BHSCT with various logistical and operational issues addressed on an ongoing basis.

408.2 Under the oversight of the Department's EAG-T a pilot of asymptomatic testing using LFDs in patient facing staff commenced in the Southern Health and Social Care Trust (SHSCT) on 22 January 2021, followed by the Northern Health and Social Care Trust (NHSCT) during week commencing 25 January 2021 [Exhibit INQ000325585]. A recommendation was made to the Department by the EAG-T on 12 March 2021 to stop the pilot and to implement a full rollout of the asymptomatic testing programme of patient-facing staff. On 4 June 2021 I wrote to HSC Trust Chief Executives to request that HSC Trusts develop robust preparations and plans for a significant expansion of regular asymptomatic testing of patient-facing staff in all programmes of care [Exhibit INQ000377271]. In this correspondence I also requested HSC Trusts to consider using the optimum mix of different testing technologies including the deployment of LAMP technology. This technology was able to be used with salvia and samples from swabs and unlike PCR did not require sequential changes in temperature during the processing therefore providing more rapid results. In NI the deployment of LAMP was an early focus of a suitable Covid-19 testing technology for testing

asymptomatic healthcare workers. In December 2020, a pilot study to test the process involved in implementing saliva testing for SARS-CoV-2 amongst healthcare workers was undertaken in the Belfast HSC Trust [Exhibit INQ000408167]. On 7 July 2021, I attended a meeting with Health and Social Care Trust testing leads to highlight the importance of healthcare worker testing. At that meeting the decision was taken for the asymptomatic testing programme to be extended to include all HSC Trust staff, both patient facing and non-patient facing workers [Exhibit INQ000325597]. Routine LFD testing of asymptomatic workers was paused from 4 May 2022 for asymptomatic workers whose role did not bring them into direct contact with patients, and from 3 October 2022 for asymptomatic patient facing workers [Exhibits INQ000416795 and INQ000408170].

409 In addition to testing programmes for healthcare workers and eligibility for clinical pathway testing set out in the IPT for Covid-19, which included a range of asymptomatic testing initiatives, EAG-T also played a key role in recommending and enabling programmes of testing to support visiting across a range of health and care settings, including hospital sites [Exhibits INQ000408171 and INQ000377272].

409.1 While testing capacity more generally was constrained early in the pandemic, available testing capacity was prioritised early on to protect the sickest and most vulnerable and those healthcare workers caring for them. The approach to the management of self-isolation of cases, suspected cases and contacts who were healthcare staff was by necessity precautionary and was a contributing factor impacting the availability of staff.

409.2 Whilst Covid-19 tests were developed rapidly, the time taken to scale up testing capacity early in the pandemic in particular was at times significant, largely impacted by global supply chain challenges in relation to the availability of reagents and other consumables.

409.3 The impact of this meant that, early on in the pandemic, testing was primarily targeted at protecting the sickest individuals requiring inpatient care and those

caring for them. This was reflected in the Department's Covid-19 Testing Strategy [Exhibit INQ000103650] and the earliest versions of the Department's Interim Protocol on Testing [Exhibits INQ000120705 and INQ000103724]. The Department was early to put in place a protocol to guide the targeted and prioritised use of available Covid-19 testing resources. The first version of the Interim Protocol on Testing dated 19 March 2020 set out priority groups for testing and acknowledged a need for an approach which supported testing healthcare workers under certain conditions. Healthcare workers prioritised for Covid-19 testing included those who were providing frontline patient facing clinical care [Exhibit INQ000120705]. The Interim Protocol on Testing was kept under continuous review with priority groups for testing extended regularly – including greater testing of healthcare staff - in line with emerging scientific evidence and with expansions in testing capacity.

409.4 The Department worked hard to rapidly build testing capacity. We increased our testing capacity significantly through the formation of new partnerships to deliver on this, both locally (through the Northern Ireland Covid-19 Testing Scientific Advisory Consortium established at my request and which comprised both Universities in Northern Ireland, the Agri-Food Biosciences Institute and the ALMAC Group to boost local Northern Ireland based testing capacity - referred to as 'pillar 1'), and nationally (testing capacity increased significantly with the establishment of 'pillar 2' testing as part of the United Kingdom National Testing Programme).

409.5 In the earlier phases of the pandemic, when there was a limit on the information that was available about the Covid-19 virus to guide the public health response, a precautionary approach was taken to the management of self-isolation of cases, suspected cases and contacts who were healthcare staff. This was in keeping with established public health principles underpinning the management and handling of cases and contacts.

409.6 This approach was considered proportionate and commensurate given that healthcare staff were often working in inherently higher risk settings and caring for the most clinically vulnerable patients and service users.

409.7 The approach to the management of self-isolation of healthcare staff was kept under review and was refreshed a number of times throughout the pandemic as more became known about the virus, in response to changing epidemiology, and as the wider public health risk posed by the virus evolved and lessened with the implementation of the Covid-19 vaccination programme and the availability of new Covid-19 treatments.

409.8 Advice for healthcare workers that they could leave isolation after testing negative ('Test to release') came much later as the science of the virus was better understood. This happened in line with evolving national scientific understanding and evidence base and, in broad terms, in line with the other UK nations.

Specificity and sensitivity of tests

410. This is addressed in significant detail in Chapter 6 of the UK Chief Medical Officers' Technical report on the Covid-19 pandemic in the UK to which I contributed [see Exhibit **INQ000203933**. I have not sought to replicate this detailed analysis in this statement.

Dates of Availability of Tests to Health and Social Care Workers

411. The date of when tests were made available to workers in healthcare settings, and whether and how the sensitivity and specificity of such tests changed over time. Early in the pandemic, I identified the need for the Department to put in place a protocol to guide the targeted and prioritised use of available Covid-19 testing resources [See the Interim Protocol on Testing dated 19 March 2020 at Exhibit INQ000120705]. From early on in our response, testing was prioritised and primarily targeted at testing in health and social care settings with the aim of protecting the sickest and those caring for them. This was reflected in the Department's Covid-19 Testing Strategy (this has been exhibited at paragraph 404) and the earliest versions of the Department's IPT for Covid-19: Version 1 dated 19 March 2020 (this has been exhibited at paragraph 405) and Version 2 dated 26 March 2020 [Exhibit INQ000362314].

412. In the 'containment phase', our priorities for testing were cases (people who became symptomatic) and contacts of cases to establish if the virus had been transmitted between cases and their contacts. As we moved to the 'delay phase' from 12 March 2020, our priorities for testing were i) people who become unwell and required hospital admission (including patients who require critical care), ii) health and social care workers who treated and cared for those who become unwell, and iii) circumstances were testing was used to inform the risk assessment and management of outbreaks or clusters in residential or care settings (e.g. care homes or prisons).

Covid Testing to Support Clinical Care Pathways

413. The utilisation and deployment of Covid-19 testing was a key element of maintaining and supporting clinical pathways in the healthcare system in Northern Ireland during the Covid-19 pandemic in reestablishing non-urgent elective surgery and diagnostic screening programs. As previously described, the Department's IPT for Covid-19 (an example of an IPT has been exhibited at paragraph 405) was an operational tool which provided information on eligibility for testing and advice on how to access testing.

414. The IPT was kept under continuous review with priority groups for testing extended regularly in line with emerging scientific evidence and with expansions in testing capacity. The IPT also set information on eligibility for testing to support a range of clinical pathways. This included testing to support elective surgery 'green pathways' as part of a wider suite of public health measures including the use the use of Personal Protective Equipment (PPE), good hand hygiene, and other robust infection prevention and control (IPC) measures.

415. As CMO, I issued a letter to all HSC Trusts on 14 January 2021 setting out arrangements for the use of LumiraDX (a new rapid test for Covid-19) in HSC Trust Emergency Departments (EDs) [Exhibit INQ000408174]. LumiraDX delivered results within 12 minutes of the test being taken and this enabled EDs

to very quickly identify patients that did not have Covid-19, thus enabling faster decision-making in relation to patients' care and treatment. This new testing technology helped support the management of significant demands on our EDs and on the HSC system as a whole.

Regulatory issues

416. CMOG and other policy colleagues also worked closely with RQIA to utilise their expertise in supporting care homes, domiciliary care providers and supported living services as described further at paragraph 461.2. By way of example this included ensuring that RQIA had regulatory flexibility [Exhibit **INQ000103688** in terms of inspections to reduce the risk of the introduction of infection into care homes and the re-alignment of RQIA staff were requested by the Department and agreed to establish a Service Support Team [Exhibits INQ000137313, INQ000137315, and INQ000137316] which was announced by the Health Minister on 14th April 2020 [Exhibit INQ000137317]. The establishment of this support team was the outworking of collaborative work between CMOG, which sponsored RQIA, and the Chief Social Work Officer and his policy team (which had, among other areas, policy responsibility for Care Homes, domiciliary (home based) care and supported living services) and RQIA.

417. During this period, the RQIA Service Support Team was a key support mechanism acting as the point of contact for providers of adult residential and nursing homes, domiciliary care and supported living services who had questions and issues arising from the pandemic [Exhibit INQ000137316]. The main objective of this exercise was to ensure that care home, domiciliary care and supported living providers had an identified single point of contact to raise issues and receive the most up to date advice, guidance and support from the RQIA's expert teams of inspectors who were all registered nurses, social workers or Allied Health Professionals and therefore suitably experienced for those supporting this function. The RQIA had key points of contact identified in each Trust to ensure that the information being passed on was the most current and also in order to refer specific queries to Trusts if they were unable to resolve the matter. In addition, the RQIA were afforded broad flexibility to work with providers

to find bespoke solutions to specific issues beyond the remit of generic standards or regulations, to provide safe, pragmatic remedies on a case-by-case basis. While care home, domiciliary care and supported living providers will be able to reflect their experience I believe this support was well received and it is my view that RQIA made a significant contribution with the development of this Service Support Team and that this was an appropriate use of their skills and expertise. At the outset of the pandemic the absence of dedicated Chief Executive in the PHA was in the Departments view a material risk. This was a material concern for me and a matter that I raised with the Department's Permanent Secretary and Accounting Officer. As I recall, in discussion with the Chairs of the RQIA and PHA, the then Chief Executive in RQIA, who was an experienced CEO with a health professional background in senior leadership positions, was seconded to the PHA and appointed as interim CEO. The Director of Quality within RQIA was initially seconded to the Department to provide additional support given significant relevant professional experience in public health and in particular health protection and subsequently applied in open competition and was appointed to the position of DCMO. While any such moves undoubtedly meant greater challenges for RQIA, there were significant wider system risks and vulnerabilities which could not be left unaddressed such were their potential consequences.

Our role in RQIA reducing statutory inspections

418. The Regulation and Quality Improvement Authority (RQIA) did maintain an inspectorate function and continued to take enforcement action where necessary over the course of the pandemic. The details of the inspectorate function and enforcement action taken during this period and its effectiveness, and whether RQIA played a useful role or identified important points from non-statutory inspections during the relevant period, is best addressed to RQIA. One example of where I believe RQIA made a significant contribution is described in greater detail at paragraph 37. Given my concerns regarding the number of healthcare associated outbreaks of Covid-19 in healthcare settings, I engaged directly with the Interim Chief Executive of the RQIA about plans to introduce a series of Infection Prevention and Control focussed inspections of health and social care

Acute and Independent Hospitals across Northern Ireland. Separately, the RQIA had also received information from members of the public who had raised concerns about IPC practices when visiting hospitals. Between September and December 2020, the RQIA inspected a total of 13 hospitals (11 Acute hospitals across the five Health and Social Care Trusts and 2 hospitals within the Independent Sector) and produced individual inspection reports using an inspection framework drawing from a range of best practice sources in the management of Covid-19. During this process, the RQIA inspected both clinical and non-clinical areas of the hospital sites visited speaking with staff and engaging with patients to understand their experiences when using the services. Any issues of note or concern identified were escalated in real time with the relevant organisation and also referenced in the individual hospital inspection reports. To support wider system learning across the healthcare sector the RQIA in addition published an overall report "COVID-19 HSC and Independent Hospital Inspections - Emerging Learning" on 18 December 2020, setting out the key thematic findings and opportunities for improvement identified during the series of hospital inspections [Exhibit INQ000398911].

419. The level of RQIA's inspectorate function varied in line with the HSC response to the pandemic. On 20 March 2020, the Department in a letter from myself, gave direction to the RQIA [Exhibit INQ000103688] to reduce the frequency of its statutory inspection activity and cease its non-statutory inspection activity and review programme with immediate effect until otherwise directed. RQIA from April 2020 recorded inspections as onsite, remote or blended; blended inspections included elements of both on-site and remote inspection. In the three months April 2020 to June 2020 following the direction, RQIA carried out 63 inspections of which 51 were on site, 11 were remote and 1 was blended. This direction, approved by Minister on the 19 March 2020, was to enable RQIA to prioritise inspections on an evidence, intelligence led and risk-assessed basis to focus their activity where it was most needed in a flexible and proportionate manner and to reduce the risk of the introduction of Covid-19 into care homes through reducing inspection visits given the recognised association between high level of community transmission and footfall into care homes. I was of the view then and I remain of the review that this was a proportionate and appropriate step at the

time. At all times, the primary responsibility for maintaining standards remains with the provider of services and secondly with the commissioner of those services. In relation to the care home sector, this care is commissioned by HSC Trusts and all wider HSC services are commissioned by the HSCB supported by the PHA. HSC Trusts, among other corporate responsibilities, have a statutory duty of quality [see section 34 of The Health and Personal Social Services (Quality, Improvement and Regulation) (Northern Ireland) Order 2003 (21003 No. 431 (N.I. 9)] with respect to the health and social care services they provide. As commissioners the HSCB and PHA then also had a statutory duty of quality with respect to health and social care services that they commissioned. Inspection and regulation is an important element of maintaining standards and in providing assurance, however it is not in my view a substitute for nor does it replace the primary responsibility of provider organisations and commissioners for the quality and standard of care.

420. Following a review of the direction the Department rescinded the direction, given a reduction in community transmission and in light of the recovery process and rebuilding of HSC services [Exhibit INQ000346700] on 22 June 2020.

421. During the pandemic, in common with the approach taken by my counterpart CMOs, I fully supported the GMC in their decision to grant professional registration to retired and trainee doctors to increase the number of registered doctors during the pandemic. I considered that this was a practical and proportionate step. Recognising the very real concerns of doctors with respect to their registration and the regulatory environment, along with the GMC as UK CMOs we communicated with the profession to recognise the unprecedented pressures they were operating in and to provide assurance that this context was fully appreciated. These communications to medical and public health professionals were issued 11 March 2020, 1 May 2020, 11 November 2020 and 4 December 2020. [Exhibits INQ000049584, INQ000048595, INQ000071564 and INQ000072041].

Impact and Inequalities

422. Infectious disease epidemics and pandemics usually expose and exacerbate existing disparities and health inequalities, such as those associated with deprivation, ethnicity, age and sexuality [Chapter 2 of the UK CMO Technical report, Exhibit **INQ000203933**]. As evidence emerged, some disparities observed in the Covid-19 pandemic were because of the airborne transmission of the virus, which meant that there was an increased spread in crowded households or in individuals working in poorly ventilated environments. This compounded factors already adversely affecting vulnerable individuals and populations. Early evidence emerged about poorer outcomes for older patients and men. Additional data highlighted the risks for those with certain underlying conditions and those who were immunosuppressed.

423. Actions were taken to address disparities exacerbated by the pandemic. Initially these actions focused on reducing the risk of infection. For example, the Department supported the publication of guidance on how to make workplaces more secure for individuals who were unable to work from home including specific guidance for occupations at higher risk of exposure. The Department and CMOG worked with other departments the PHA, and the Executive Information Service (EIS) to develop guidance and infographics for the public. This guidance and infographics were translated into several spoken languages within Northern Ireland, and communication campaigns were developed through working closely with a wide range of community sector representative organisations and communities. Throughout the pandemic, approaches to addressing and minimising these disparities also included, for example, the implementation of large-scale asymptomatic testing programs in care homes and other care settings, the asymptomatic testing of health service staff and other carers, asymptomatic testing in the education sector, as well as targeted testing in areas of higher transmission. Later in the pandemic, community testing programmes through the Northern Ireland Smart Program (NISMART) were delivered through local government and the hospitality sector, for example to assist widespread community access. This facilitated opening of the sector and return to work.

424. In terms of data and analysis with respect to inequalities, in NI we were able to review the impact of the pandemic in relation to age, gender, and social deprivation. Ethnic minorities form a much smaller proportion of the population than in many other regions of the UK, and ethnicity is not well coded in NI health care records. As a consequence, analysis regarding ethnic minorities was not available due to the poor coding of ethnicity in health care records and it was not possible to look at trends in those from different ethnic backgrounds nor to analyse differential impacts of the pandemic according to ethnicity in our general population. In contrast, we were able to look at the influence of social deprivation on the various impacts of the pandemic. In addition, data collection relating to co-existing morbidities and underlying health conditions was also not also routinely reported and so also could not be analysed in real time.

425. A range of specific measures were put in place to improve the quality and timeliness of data during the pandemic as a result of close work between Trusts, the PHA, the Department's Information Analysis Division (IAD) and NISRA. The Department's has recently published a Data Strategy **INQ000183443** which includes the commitment to the establishment of an HSC Data Institute. Northern Ireland is currently introducing a new patient Electronic Health Care Record. There is now also increased emphasis on data acquisition and data flows within the PHA and all of these measures will collectively help to ensure that data flows should be improved during any future pandemic. In terms of inequalities, an area which requires significant improvement is the coding of ethnicity.

426. On 9 September 2021, the Education and Health Ministers issued a Joint Memo to the Executive outlining Revised Arrangements for the Identification of Close Contacts in Schools [Exhibit INQ000305111]. The revised approach was introduced when evidence became available based on analysis by the PHA of the disproportionate impact that the contact tracing was having in children from lower socioeconomic groups, the approach was changed to minimise exclusion when additional evidence suggested it was proportionate to do so.

427. At different stages of the pandemic the steps taken were intended to offer support and protection to other vulnerable groups including those socioeconomically deprived, the learning disabled, vulnerable children, victims of domestic violence, cancer patients and patients on waiting lists. The focus on this wider range of vulnerable groups reflected the Department's full range of responsibilities. Examples of these wider groups are described in paragraph 163 and 428.

Wider health, societal and economic impacts of the regulations

428. The regulations introduced to put NPIs on a statutory footing were subject to regular reviews by the Executive. Each review considered the public health implications, as is reflected in the relevant review of regulations papers subsequently submitted to the Executive. Any potential emerging equality issues, which required amendments to the regulations were reflected in the reviews which I approved. From the second Review of the Health Protection (Coronavirus, Restrictions) (Northern Ireland) Regulations 2020 [Exhibit INQ000346705] and thereafter throughout Wave 1 of the pandemic [Exhibits INQ000346706, INQ000346707, and INQ000346708] and subsequent waves, the Executive papers considered, not only the impact of the Coronavirus pandemic itself, but also the measures put in place to control the spread of infection. The wider health, societal and economic impacts of the regulations were integral to the Executive weighing up the continuing necessity and proportionality of the restrictions and were also part of the consideration of each individual new measure proposed. This information was supplemented by the Monitoring of 'Making Life Better' Indicators as described at paragraph 429 and supported by a number of pieces of work taken forward at the UK level by DHSC and PHE, including work to examine the apparent disproportionate impact of Covid-19 on the BAME population as well as marginalised groups such as the Roma community. The Health Intelligence Unit in the PHA developed an evidence overview on inequalities at the start of the pandemic [Exhibit INQ000325791]. This was shared across the Department and used to inform policy and as appropriate. In the circumstances of the pandemic response, it was, however, not possible to carry out an Equality Impact Assessment on those individuals or groups with protected characteristics.

429. During the first wave of the pandemic in 2020 the Department (at my request) commissioned the Institute of Public Health in Ireland (IPHI) to look at the range of indicators set out in Making Life Better, the overarching strategic framework for public health in NI, and provide evidence drawn from local, national or international sources on trends in these indicators during the pandemic. The IPHI reports looked at the range of indicators set out in Making Life Better, and provided evidence locally, nationally or internationally on trends in these indicators during the pandemic, or research reports on likely impacts on these indicators due the pandemic. These could come from government reports, academia, community/voluntary organisations, the WHO, etc. Indicators covered include:

- Poverty, employment and economic security;
- Educational attainment;
- Housing quality and social capital;
- Air quality and water quality;
- Smoking, alcohol, teenage births, obesity, physical activity, and sexual health;
- Drug use, homelessness, domestic violence;
- Home safety and road safety;
- Life expectancy, infant mortality, long term conditions, and hypertension;
- Mental health and suicide; and
- Loneliness and social isolation.

430. Each report only provided updates on new evidence or research in any of these areas since the last report was collated. The IPHI also looked for research reports on likely impacts of the pandemic on these indicators. Sources included government reports, academia, community/voluntary organisations and international organisations such as the WHO. The first two reports were produced in May 2020 [Exhibits INQ000276461 and INQ000276462] and the third report in July 2020 [Exhibits INQ000276463 and INQ000276464]. The purpose of these IPHI reports was to collate in one place indicators, research, evidence and developments in scientific understanding nationally and worldwide about the impact of SARS-CoV-2. The reports were sent to key people for

information. They documented the emerging understanding of the virus and its impact on wider population health indicators, as well as the impact of the public health and social measures (PHSM) put in place to control virus spread (what were widely described in Government as non-pharmaceutical interventions). Initially the impacts were unknown and the reports provided information on potential impacts across the social determinants of health, health behaviours and selected disease outcomes. Over time these reports were able to reflect the growing body of evidence of population health and social impacts of COVID-19. According to the IPHI reports, the overall effect on MLB life expectancy indicators was assumed to be negative, with measured increases in both direct and indirect COVID-19 deaths. Initially it was predicted that mental health may decline, and people with mental illness may suffer most, with a potential for increases in suicide. The December 2021 report then summarised findings of the most recent Health Survey NI which showed a deterioration in the indicators for mental health versus the 2019/20 survey. The IPHI reports pointed out that PHSM will increase social isolation and loneliness and suggested that those people shielding, people living alone, and lower socio-economic groups may be especially vulnerable. The prevalence of long-term illness may increase with potential for delayed presentation and diagnosis, disease exacerbations and suboptimal disease management. Given the time period for recording the MLB indicators, many weren't available locally for the time period in question by the time of the final report in December 2021, but information and developments from around the world were summarised under the most relevant MLB indicator headings. In summary, these IPHI reports were observational and did not make recommendations for action as such, as that was not the purpose of the work IPHI had been invited to do for the Department. The reports were shared with policy leads for information and consideration, and they informed the development of Executive Papers. Further reports were produced throughout 2020 and 2021.

431. In addition, the PHA undertook work on the impact of face-coverings and the consequences particularly in respect of existing health inequalities. The PHA also carried out some analysis on the detrimental impact of the self-isolation guidance. This demonstrated that children from lower socio-economic groups

were disproportionately impacted. As indicated at paragraph 426, as a consequence, the approach to the definition of close contacts in school aged children was changed to reduce the disproportionate impact on certain children.

432. All these Reports were shared within the Department and were used to inform the development of Executive papers reviewing the coronavirus restrictions regulations and related public health guidance.

433. During the vaccination programme, extensive work was undertaken by the Department and PHA teams in analysing vaccine uptake at the super-output area for deprivation as well as other risk factors such as age and gender to enable targeting of public information campaigns and mobile vaccination clinics to improve uptake. This included work by the PHA to increase vaccine confidence by promoting vaccine uptake amongst those groups that were more hesitant about vaccination. This also included workplace-based vaccination programmes. I chaired the weekly Oversight Board which reviewed such data and agreed the plans for improvement.

434. The Department published Coronavirus Related Health Inequalities Reports [Exhibits INQ000137375, INQ000137376, and INQ000183436] in both June and December 2020. This report presents an analysis of Coronavirus (Covid-19) related health inequalities by assessing differences between the most and least deprived areas of NI (by super output area) and within Local Government District (LGD) areas for Covid-19 infection and admission rates.

435. Many people saw a deterioration in their mental health during the pandemic, at times exacerbated by the unavoidable NPI protections. The Department, professional and policy colleagues were aware of these risks from early in the pandemic and ensured that a range of initiatives from the mental health cell were put in place to mitigate these effects, including public information campaigns highlighting for example the advice available on the Mind Your Head website. While I was, and remain, fully cognisant of the severe impact of the pandemic upon the mental health of many people, I have not in this statement set out in detail all steps taken by the Department in this regard. This is because I myself

did not lead on this issue, and it was primarily within the remit of SSPG. I did, however, have a more specific role in dealing with the impact upon health care professionals. As described in paragraph 120, information and guidance for people was also available on the NIDirect website. It directed people to sources for advice and support, including support for mental health and well-being, including the Minding Your Head website. Information was also available via the 'Covid-19 NI' mobile app, with an on-line version of the app also available. A Northern Ireland Covid-19 Community Helpline, managed by AdviceNI, and was available 7 days a week to support anyone who was feeling isolated. The helpline also provided support with issues such as access to food and other essentials such as medicines and in the first wave of the pandemic arrangements were put in place to arrange the collection and delivery of medication to those who were isolating or shielding. The Community Helpline connected people to a range of practical and emotional support services, including local volunteer supported shopping and local or community food support organisations. A Covid-19 Virtual Wellbeing Hub was launched in mid-June 2020 providing access to self-help guides and tailored information from local mental health and well-being charities. These resources were designed to help maintain and promote positive mental health and well-being both during and after the Covid-19 pandemic.

436. As the epidemic progressed and in response to the impacts on mental health, the Health Minister announced funding for of £10m on 10 May 2021 for a Mental Health Support Fund, administered and managed by Community Foundation NI, and open to community and voluntary sector organisations offering services for people with mental ill health throughout Northern Ireland [Exhibit INQ000348921]. The following month the Health Minister launched a 10-year strategy for Mental Health 2021 – 2031. In a press release the Health Minister stated that "*The Strategy is built on a vision of a society which promotes emotional wellbeing and positive mental health for everyone, which supports recovery and seeks to reduce stigma and mental health inequalities. In the vision we set out the objective of a system that is consistent and provides equity of service. We also want to break down barriers so that individuals and their needs are right at the centre – a truly person centred care*." [Exhibit INQ000348922].

437. On 8 September 2021 the Health Minister appointed Professor Siobhan O'Neill as the Mental Health Champion for Northern Ireland. Professor O'Neill had until that date been acting as the interim mental health champion [Exhibit INQ000348923]. On 29th October the Finance Minister announced that an additional £5m had been allocated to the Mental Health Support Fund which had been heavily oversubscribed [Exhibit INQ000348925].

438. During Wave 3 the Health Minister also allocated funding to support Carers in NI. On 19 April 2021 he allocated £4.4m to a carers support fund. In his press release the Health Minister said: "*The new Carers Support Fund will provide support for charities working for and with carers. "The debt the health service and wider society owes to unpaid carers cannot be overstated*," the Health Minister stressed. "*Without care provided by family members and friends, many vulnerable people would have been plunged into a full scale crisis over the past 12 months. This Support Fund will provide practical support and acknowledgement to what is such an important sector.*" [Exhibit INQ000348924].

439. The Department has also undertaken a consultation on wide ranging proposals to Reform the Adult Social Care system in Northern Ireland. The Health Minister officially launched the public consultation in January 2022 and it finished in July 2022. The consultation contained 48 proposals for reform which were grouped into six strategic priorities:

- Sustainable System Building – To build a stable, sustainable adult social care system;
- A Valued Workforce – that staff who work in social care will be valued, competent and resilient;
- Individual Choice and Control – To ensure the individual has control over the decisions affecting their social wellbeing and their care and support needs;
- Prevention and Early Intervention – A renewed focus on prevention and early intervention to support people to achieve their own social wellbeing;
- Supporting Carers – Carers will be supported in their caring duties and entitled to support in their own right; and

- Primacy of Home – The purposes of adult social care, including group care services, is to support citizens to live well in their own home in connection to their families, social networks and communities, providing maximum choice and control of their daily living arrangements and their care and support provision.

440. The Protect Life 2 Strategy Steering Group for preventing suicide and self-harm continued to meet throughout the pandemic period. I continued to chair regular meetings of this Group throughout the pandemic response to ensure continued awareness raising of available supports, monitoring of data to signal early emergence of potential issues and to ensure clear information flows with both statutory and community and voluntary colleagues and partner organisations. Calls to the 24/7 Lifeline Helpline, Self harm Intervention Programme referrals and Sudden Death notifications were closely monitored during this time given our concerns of the potential impact of the pandemic itself and the NPI measures that had been introduced. The Self-Harm Intervention Programme, Lifeline and Bereavement Support Services were widely promoted via social media and professional communication channels. A wide range of mental health, emotional health and wellbeing and stress control training was delivered online. All services delivered under Protect Life 2 continued to be supported including training, awareness raising and public information campaigns, counselling provision, Community Response Plans, and the Flourish churches suicide prevention initiative. The Mental Wellbeing Hub was launched. An HSC Framework was published 'Supporting the Well-being Needs of our Health and Social Care Staff during COVID-19: A Framework for Leaders and Managers'. This document ensured that all staff and volunteers have access to support needed during the Covid-19 response and incorporated the Take 5 steps to Wellbeing message (Connect, Keep learning, Be active, Take notice and Give). A Review of Mental Health Crisis Services was also initiated.

441. The Executive Working Group on Mental Wellbeing, Resilience and Suicide Prevention comprising all Executive Ministers which I attended continued to meet and there was a specific focus on the mental health response to Covid-19 at several meetings. There was also substantial work progressed with the

Department for Education in launching the Children and Young People's Emotional health and Wellbeing Framework on 26 February 2021.

442. Inevitability this could only provide mitigation for some and not amelioration the impact and consequences for all. The full outworking's of the mental health impact of the pandemic are, in all likelihood, yet to be fully realised.

443. As CMO, I and professional and policy colleagues, in the Department were also acutely aware of the profound impact of the pandemic from regular engagement with senior leaders within health and social care. This included knowledge of published research of increased rates of anxiety, depression, psychological distress, post-traumatic stress symptoms and burnout. Throughout the pandemic response my UK CMO colleagues and I communicated on several occasions with the medical profession [see Exhibit **INQ000203933**]. Similarly other Chief Professionals including the 4 UK CNOs communicated their support to the nursing profession.

444. On 16 April 2020, the Department launched 'Covid-19: A Framework for Leaders and Managers' [see Exhibits INQ000120708, INQ000120709]. This set out a range of practical measures to protect the psychological health and wellbeing of HSC staff and volunteers during the pandemic. The Framework was based on evidence and best practice guidance and is informed by The British Psychological Society Guidance Paper [see Exhibit INQ000390023]. A Staff Wellbeing Working Group was established to oversee service delivery and to review the implementation of the Framework. The implementation of the Framework continued during the second wave, providing a range of initiatives across HSC organisations to enhance psychological wellbeing of staff. These initiatives included access to Psychological Support Helplines manned by psychologists. Care home and primary care teams also had access to the helplines in each HSC Trust area which signposted to a broad range of online resources and drop-in services in critical facilities.

445. The Health Minister in Executive papers reflected his concerns and those of the Department about the impact of the pandemic on health and social care staff. In

an urgent written statement on 30 October 2020 [Exhibit INQ000276386], the Health Minister reported to the Assembly that while he welcomed the plateauing of cases, due to recent NPI interventions, he also warned against complacency because of the potential adverse impact on the HSC system and its staff who remained under intense and unprecedented pressure. The welfare of patients, both Covid-19 and non-Covid, and of staff continued to be the overriding priority. The welfare of staff was at the forefront of the Health Minister's consideration as next steps for NPIs after 13 November 2020 were considered by the Executive. At this stage, many staff were physically and mentally exhausted. The peak of the combined HSC staff absence due to sickness, Covid-19 sickness and Covid-19 -related self-isolation during the first wave of the pandemic was in the April-June 2020 quarter when the percentage of hours lost was 11.33%. During the second wave, the percentage of hours lost rose to a peak of 9.36% in the October to December 2020 quarter and was 8.61% hours lost in the January to March 2021 quarter.

446. Several actions were also taken to address the increased pressure on staff and staff levels. These included relaunching the Workforce Appeal on 2 October 2020 [Exhibit INQ000371365] to boost HSC staff numbers to assist in the pandemic response; and introducing several measures to ensure that staff were properly compensated, within the resources made available to the Department, in recognition of the additional pressures arising from the pandemic. While I was not leading or directly involved in this work, I was aware of and supportive of the approach. The initial Workforce Appeal in March 2020 resulted in 1,702 doctors, nurses and other ancillary staff being successful in their application to work for the health service. From April 2020, and throughout the second wave, the Workforce Appeal handled almost 60,000 Expressions of Interest, and generated over 35,000 formal applications. This level of interest delivered a total of 5,949 new temporary appointments across the Health and Social Care of which almost 2,800 were health and social care appointments in various disciplines. The other appointments were non-medical and covered support services including portering, administration and clerical positions. The Workforce Appeal also commenced work in recruiting for the vaccination programme with a total of over 1,700 applications generated leading to 271 healthcare professionals being

appointed to the vaccination programme and available to cover shifts as and when required by the Public Health Agency.

446.1 While I was not directly involved, it is my understanding that the level of appointments made by the Health and Social Care Trusts were based on demand alongside the specific requirements for the roles which needed to be filled against the available applicants. Candidates may not have been successful in being offered a post or being appointed for a variety of reasons such as the suitability and availability of the candidates may not have always matched the specific requirements of the roles being offered. It was common for candidates only being able to commit to specific hours on specific days which unfortunately did not match the demands of the positions being offered by the Health and Social Care Trusts. Other candidates were seeking permanent employment, however, the Workforce Appeal was always designed with the aim of securing temporary employment in an effort to support the Health and Social Care Trusts through the pandemic. An estimated 20% of applicants either withdrew, declined an appointment, ceased to communicate or were rejected from the Appeal. However, all of the appointments made through the Workforce Appeal played a vital role in assisting the health and social care service to cope with the additional demands placed upon it during the pandemic.

Infection Prevention and Control (IPC)

447. At the outset of the pandemic, because SARS-CoV-2 was a new virus, specific scientific knowledge on Covid-19 was not available. This led to widespread anxiety across all of society. Infection Prevention Control (IPC) is a vital patient safety consideration across health and social care interactions. Its importance has been especially evident through the Covid-19 pandemic, with an increased focus on IPC practice not just in health and social care, but across the breadth of community settings. Decisions were required on what IPC measures were needed to protect patients, staff, and visitors in health and care settings. Balancing all of considerations was a complex process, not only for healthcare leaders, but also for professionals across health and social care who worked extremely hard continually to balance multiple risks throughout this pandemic,

including to themselves, their families as well as patients, to deliver the best care possible often as personal risk. The IPC guidance for Covid-19 was developed on a 4 UK nations basis. [Exhibit INQ000257936]. This supported not only consistency in practice but importantly a shared understanding of the scientific evidence across the UK. As a result, NI and the IPC Cell within the PHA, followed the UK wide IPC guidance and did not diverge form this approach during the relevant period. The PHA IPC Cell's link into the UK 4-Nations IPC Cell was an important aspect of the development of this guidance. This allowed a NI input to the shaping and influencing of expert advice and guidance. A senior IPC practitioner who was a Registered Nurse from the Gold IPC Cell led by the PHA acted as the NI representative member in the UK 4-Nations IPC Cell, which generally met daily from January/February 2020, moving to twice weekly in April/May 2020, and then weekly from August/September 2020 through to 2022. Resolved expert advice was provided by the UK 4-Nations IPC Cell to each of the nations who then would assess the guidance with a view to adopting and/or advising re its implementation in their respective jurisdictions. This supported not only consistency in practice but importantly a shared understanding of the scientific evidence across the UK. It was essential throughout the development and reviews of the guidance to ensure that it was evidence based and understood by staff, and implementable in all health and care settings. In December 2021, updated Infection Prevention and Control guidance was released containing significant amendments. The guidance was re-named to reflect the main UK IPC guidance: Seasonal Respiratory Infections and Covid-19: General Dental Services - Operational Guidance. This reflected the adoption of the hierarchy of controls framework, with patients screened and risk assessed to be assigned to the most appropriate treatment pathway. This marked a key change in patient management, with the flexibility for staff to increase personal protective equipment levels according to local risk assessments [Exhibits INQ000348859 and INQ000348861]. While the detail of the development of and ongoing review of the IPC guidance including advice on appropriate PPE for different clinical environments were as described in paragraphs 462 - 464, regular updates were provided with discussion at the UK Senior Clinicians meeting which was attended by the CNO, DCMOs and myself. These discussions considered the strategic approach to the development of the IPC guidance and process for

ongoing review and wider stakeholder engagement and any new evidence on infectiousness and transmission risk that was relevant.

448. The aims of the Covid-19 IPC guidance were to reduce the transmission of SARS-CoV-2 in health and care settings, protecting patients, staff and visitors, while supporting the safe delivery of health and care services. This guidance was produced in the context of an evolving evidence base, with clinical practice adapting in response to emerging health needs, this required a number of considerations to be taken into account. This included the emerging evidence on the transmission risks for SARS-CoV-2, which was often initially based on rapid assessments of real-world scenarios. It also involved international recommendations regarding best practice in IPC. These built on the well-established evidence base for IPC practices derived from the World Health Organization (WHO). The IPC guidance the UK was initially based on amended UK pandemic flu guidance, however it was adapted throughout the pandemic in accordance with emerging evidence, expert recommendations such as from UK Scientific Advisory Group for Emergencies (SAGE), and subgroups, and changes in the epidemiology of SARS-CoV-2. Other considerations included the evolving healthcare situation in the UK. The IPC guidance developed over the course of the pandemic to reflect these changes, moving from initially focusing on managing patients with Covid-19 during the first wave, to balancing this with supporting the safe restoration of NHS services from the middle of 2020 onwards with the establishment of risk-based clinical pathways.

449. It was essential throughout the development and reviews of the IPC guidance to ensure that it was consistent with established IPC practice, was understood by staff, and was implementable in all health and care settings. Clear evidence-based IPC guidance was essential for the morale of the workforce and to support and reassure clinicians who were responding to a new virus and were understandably concerned for the safety of their patients, colleagues, families and themselves.

450. As we have considered in the CMO Technical Report Chapter 10 pages 360 to 365 [see Exhibit **INQ000203933**], these are complex issues with inherent

tensions between them. At a UK level, strong and effective relationships between organisations across the UK ensured that these issues were discussed and consensus, evidence-based IPC practice was reflected in the UK Covid-19 IPC guidance. Such collaboration resulted in consistency of approach across the 4 UK nations. Collaboration with other stakeholders, such as the Academy of Royal Medical Colleges (AoMRC), the Health and Safety Executive (HSE) and ventilation experts, added additional expertise to the development of the IPC guidance. There was, however, never complete consensus across all professional groups, and this is likely to be the case in any future pandemic given the complexity of the considerations.

451. Continual evidence reviews were undertaken by the UK public health bodies to identify changes in the evidence base for IPC interventions and reflected in updated guidance, to provide assurance to all stakeholders that the full range of evidence was being assessed. Creating a systematic and consolidated way of communicating this knowledge from the 4 UK health systems' specialist IPC advice to all frontline workforces was vital, and not always easy. This was done via regular webinars with directors of nursing and directors of IPC in providers, as well as specific communications materials to support implementation of IPC measures. Again, 4-nation alignment on this was important.

452. Many of the IPC measures recommended across the NHS for Covid-19 were known and established IPC practices consisting of standard infection control precautions (SICPs) and transmission-based precautions (TBPs). The Covid-19 IPC guidance, as well as outlining when and where SICPs and TBPs should be used, contained a number of specific measures for Covid-19 such as universal masking for source control (stopping infection at source before they spread to others), Covid-19 specific treatment pathways and physical and social distancing within healthcare settings. There was also an emphasis on the use of a hierarchy of controls approach, which encompasses a risk assessment of the effectiveness of potential interventions in individual contexts including consideration of the environment, the patient and the healthcare practitioner.

453. The guidance document Covid-19: infection prevention and control (IPC) Guidance on infection prevention and control for seasonal respiratory infections including SARS-CoV-2 was first published on 10 January 2020. The guidance was issued as official guidance jointly by DHSC, Public Health Wales (PHW), Public Health Agency (PHA) Northern Ireland, NHS National Services Scotland, UK Health Security Agency (UKHSA) and NHS England. There was to my knowledge no IPC guidance developed solely in NI and the IPC Cell within the PHA in NI did not diverge from the UK wide IPC guidance. The PHA chaired the IPC Cell and all IPC Guidance ratified in Northern Ireland followed this guidance document and its subsequent updates, cascading via the HSCB to all GP practices in NI.

454. The guidance clearly defined: when droplet or airborne PPE should be worn; what constituted an aerosol generating procedure; and when air filters were required. The HSCB (now SPPG) recommended to GP practices that they should refer to and follow this guidance at all times throughout the pandemic. In line with the guidance every GP practice was provided with both droplet and airborne PPE (including FFP3 masks) in early March 2020 and GP practices could then order replenishments directly from BSO throughout the pandemic.

455. The evidence for IPC measures to mitigate the risks from Covid-19 continued to develop and evolve as our understanding of the pathogen increased including the implications of emerging new variants. The IPC guidelines were initially informed by experience and evidence of responding to the risks posed by other pathogens, including respiratory infectious diseases such as influenza. There is established and good evidence regarding the effectiveness of SICPs and TBPs to prevent and control the transmission of known pathogens when correctly applied. The Covid-19 IPC guidance built on this evidence and added specific measures based on the evidence of the transmission and impact of SARS-CoV-2, such as universal masking in healthcare settings and the cohorting of infected patients.

456. Measures to control Covid-19 transmission were implemented while the epidemiology of the pandemic was changing with the emergence of variants of concern and the introduction and effect of population-level public health

mitigations. Later the wider context changed further with the later availability of vaccines and therapeutics. Continual adaptation of measures was required in response to the epidemiology and wider measures in place and the use of the hierarchy of controls approach to risk assessment across different settings and services.

457. It is very difficult to assess the effectiveness of individual IPC interventions due to the multi-interventional nature of IPC practice and widespread community transmission during the pandemic. However, evidence suggests that the application of the established IPC practices was effective in markedly reducing the transmission of SARS-CoV-2 in healthcare settings across the UK [see footnote 34 of Exhibit INQ000177534]. The evidence also suggests that the effectiveness of IPC practice in preventing transmission was related to their optimum application in the healthcare environment in keep with recognised best practice [footnote 35 of Exhibit **INQ000203933**].

458. Universal masking (source control) with face coverings or surgical masks (type II or IIR) to prevent the transmission of SARS-CoV-2 and other respiratory infectious agents was implemented in healthcare settings from 15 June 2020. There is evidence to suggest that this intervention was effective in reducing transmission of Covid-19 in the healthcare environment, though importantly as part of the hierarchy of controls and considering possible associated risks if not properly managed [footnote 36 of Exhibit **INQ000203933**]. It was also important to consider inappropriate use of PPE, the role of other factors such as ventilation or crowding in high throughput departments, and the potential inability or unwillingness of patients to wear masks.

459. Physical and social distancing were also applied to healthcare settings in response to the pandemic and were reported as being effective in preventing transmission [footnote 37 of Exhibit **INQ000203933**]. Similarly, Covid-19 management pathways separating infectious from non-infectious patients, typically via cohorting were also implemented and have been reported as being effective at mitigating the risk of transmission posed by the SARS-CoV-2 pandemic [footnote 38 of Exhibit **INQ000203933**].

460. A computational modelling approach was used to determine the effectiveness of IPC interventions in England in the first wave of the pandemic which was shared with NI and shared with other jurisdictions and this evidence I understand informed action in NI by the IPC Cell within the PHA [footnote 39 of Exhibit **INQ000203933**. This model estimated that the most effective interventions for the prevention of nosocomial Covid-19 infections in patients was decreasing occupancy, increasing spacing between beds, and testing patients on admission. Universal mask use was found to be the most effective single intervention for preventing transmission among healthcare workers, although importantly it was the collective impact of all interventions that demonstrated greatest effects. The study found that interventions introduced over the first wave of the SARS-CoV-2 pandemic in England probably reduced healthcare worker infection rates by around 51% (95% confidence interval 43.6% to 55%), with authors estimating that without IPC interventions, nosocomial Covid-19 infections in patients could have been 5-fold higher (5.2% versus 1% of susceptible inpatients. The findings of this and other related studies were considered at the UK Senior Clinicians meetings. Colleagues in the IPC Cell in the PHA will be best placed to advise on how this modelling approach subsequently informed or contributed to change in approach to IPC measures in NI.

461. Importantly, it was difficult to separate aerosols generated by natural respiratory activities, such as coughing, from those generated by procedures. This evidence supported the removal of several aerosol generating procedures (AGPs) from the AGP list in England and Wales, including some oxygen modalities such as high flow nasal oxygen, non-invasive ventilation and manual facemask ventilation.

462. Understandably, clinicians and those working in care homes and social care were concerned that infection prevention and control practices and resources available would not only protect them from becoming infected at work and subsequently infecting their patients but were also appropriate to the levels of risk in different settings and for different activities and procedures. Recommendations in the IPC guidance were always made using the best available and most up to date evidence. This evidence was frequently reviewed with updates being provided to

UK CMO at the Senior Clinicians meeting by UKHSA colleagues. Especially in the early stages of the pandemic there was widespread concern in some professional groups that the IPC measures being recommended were not sufficient. I believe in part, these concerns were based on a perception that IPC was being driven by supply constraints as a consequence of undeveloped supply chains rather than science. At no point was the recommendations of myself or UK CMO colleagues based on expert advice informed or influenced by supply constraints. While colleagues in the BSO or the PPE Supply Cell may be better placed to comment, there were significant challenges in ensuring full and adequate stock levels to meet anticipated demand for PPE, to my knowledge there were no occasions when in NI we were not able provide appropriate PPE to staff despite supply issues. Despite investigating the possibility of re-using PPE equipment, there was never any need to do so. This was all greatly assisted by considerable efforts by Trusts, BSO and the PPE Supply Cell with respect to modelling anticipated demand, additional procurement and efficient stock control and distribution and in addition close liaison with the other UK jurisdiction with respect to mutual aid when this was necessary.

462.1 There were of course early difficulties in that social care providers who usually purchased their own PPE were finding it difficult or were unable to do so because of the supply chain challenges. As I recall in the early weeks of the pandemic the IHCP felt there was a lack of strategic leadership, communication and support by the HSC Trusts which had left care home staff 'feeling vulnerable.' The Minister took the decision, in my view appropriately in March 2020 that Trusts should make available PPE to care homes without charge. Procurement of PPE was centralised through BSO and supplied to care homes. I understand that other parts of the UK followed this approach. It became apparent that the independent sector required additional PPE and needed to be actively supported and closely monitored with regards to the availability of PPE. The PHA, in consultation with the HSCB, addressed the PPE challenge by developing the COVID-19 Regional Surge Plan for the NI Care Home Sector (with a distinct section on PPE) in May 2020, which was subsequently updated frequently to reflect the changing needs of the sector. This plan required HSC Trusts to co-ordinate and manage the supply of PPE to care homes within their geographical area, thus promoting

security of supply. Monitoring templates asked for feedback from care homes and Trusts on existing supplies and delivery and sought a self-reported 'RAG' rating. Initially, a weekly return of the metric was requested and was kept under review, with timelines changed to reflect changing need or surge pressures.

462.2 My team and I worked closely with RQIA to utilise their expertise to support care homes, domiciliary care providers and supported living services. This included introducing regulatory flexibility [Exhibit INQ000103688] in terms of inspections to reduce the risk of the introduction of infection into care homes. It also involved, through collaborative working with the Social Services Policy Group (which had, among other areas, policy responsibility for Care Homes, domiciliary (home based care) and supported living) and RQIA management, the utilisation of RQIA staff to establish a Service Support Team providing a liaison role between care homes and HSC Trusts which is described more fully at paragraph 416 and 417.

463. In all UK countries, respective Chief Professionals and health protection leads in public health bodies agreed that there needed to be clear communication and understanding of the responsibilities, and ownership of IPC and health protection guidance and that this consistently applied across different settings. This presented challenges particularly in some services and sectors. While IPC practice and measures were already embedded in secondary healthcare and some parts of primary care such as dentistry, in other areas this was not the case to the same extent given the difference in practice and experience. This required educational support locally, for example in the care home sector in NI. In addition, there were other patient related considerations for example, in mental health and learning disability services and in care of the elderly in secondary care or care for those with hearing deficits where implementing guidance can be particularly difficult. Interpreting IPC guidance given its complexity, ongoing review and updates, created a risk that the guidance would be inconsistently applied, particularly in the context of the rapidity of asks of clinicians in healthcare settings. At an operational level, the responsibility for fit testing was with health Trusts to ensure the right fitting respiratory protective equipment when indicated was an important way to ensure that everyone was aware of relevant requirements and had the appropriate PPE to protect them in different scenarios.

It was important in maintaining staff confidence. While I would not have been nor was, I involved in the operational aspects of the testing of the adequacy or standard of PPE to the best of my knowledge I am unaware of any problems which arose due to out-of-date or PPE without a CE mark in NI. As described at paragraph 453 the IPC Cell which was chaired by the PHA would be best placed to provide further information.

464. While it was important that UK Covid-19 IPC guidance remained consistent with the evidence as it evolved and WHO recommendations along with consistent implementation as this vital to ensuring the safety of patients, healthcare workers, and visitors across the health and social care system, it was also recognised that there was a need to balance the direct harms of infection against the unintended consequences and potential harms of the control interventions. For example, the introduction of enhanced Covid-19 IPC practices and health protection measures impacted service capacity, and which risked increased morbidity and harm through reduced services access and provision. The enhanced IPC practices that we introduced may have had implications for the wider care and support of patients, such as restricting visiting, supporting people with a learning disability or birthing partners.

465. All the guidance and implementation decisions required a balanced consideration at an operational level in a balanced risk assessment of the multiple factors, such as case rates and the possible direct and indirect health harms of the pandemic. These needed to be continually reassessed as new variants emerged, natural immunity increased, and therapeutics and vaccines weakened the link between infection and severe outcomes. An abundance of causation in balancing the risk and harm can also have adverse consequences for patient, carers and families.

466. In NI, an Infection Prevention and Control Cell was established. The Cell was chaired by the Public Health Agency's Director of Nursing, Midwifery & Allied Health Professions [Exhibits INQ000408180 and **INQ000408190** As CMO I did not attend meetings of this cell however in preparation of this statement I have been advised that membership of the IPC Cell was:

- PHA Nursing and Health Protection representatives;
- IPC leads from the five HSC Trusts & NI Ambulance Service Trust;
- HSCB Social Care;
- Regulatory and Quality Improvement Authority Inspectors;
- HSCB Primary Care; and
- GP and Dentistry representatives.

467. The NI IPC Cell linked into the UK 4-Nations IPC Cell and this was an important aspect of its role. As a result, NI contributed to, informed and influenced the expert advice and guidance. I understand a senior IPC practitioner from the local NI cell acted as the NI representative member in the UK 4-Nations IPC Cell. The UK 4-Nations IPC Cell, generally met daily in the early months of 2020, moving to twice weekly, and then weekly from late Summer of 2020 through to 2022.

468. Resolved expert advice was provided by the UK 4-Nations IPC Cell to each of the nations who then would assess the guidance with a view to adopting and or advising regarding its implementation in their respective jurisdictions. I understand representatives from other internal and external organisations were invited to attend the IPC Cell meetings to discuss any specific issues relating to them. The Cell reported through silver command into the Department's integrated Gold Strategic Cell. The chair of the IPC was provided with professional support, advice and guidance as required through the then Department's Chief Nursing Officer.

469. The IPC Cell led on and provided expert IPC advice to Health & Social Care Trusts complementing the expertise that HSC Trusts already had within their infrastructure in terms of expert IPC nurses and practitioners. All Trusts across NI were already required to adhere to the NI regional IPC Manual which provided detailed guidance for implementation and standardisation across Trusts, and this was amended and updated as new evidence emerged. Advice was also provided to Primary and Community Care. Most primary or community care settings and services in NI do not have IPC nurses or practitioners. Advice was also provided to Voluntary and Independent Sector care providers. As with Primary and Community Care many Voluntary and Independent Sector care

providers in Northern Ireland do not have IPC nurses or practitioners within their structures.

Nosocomial Support Cell

470. At this time and increasingly so from the first weeks of the pandemic through to the Spring and the Summer and continuously throughout the remainder of the subsequent waves of the pandemic there were extensive measures already in place across the HSC system to reduce transmission of Covid-19 in acute settings, including pre-admission testing, pre-admission quarantining prior to elective procedures, increased testing of healthcare workers, and reduced turnaround times for reporting of test results. Whilst these measures undoubtedly would have a positive impact in managing transmission in hospitals, I was concerned as we progressed into the winter months, that hospitals would be under increased pressure with both Covid and non-Covid admissions and therefore these measures alone may not be sufficiently effective.

471. At my request, and as agreed by the Health Minister, the Department proactively determined the need to establish a regional Nosocomial Support Cell (NSC) with respect to Covid-19 healthcare associated infection [Exhibits INQ000185385 and INQ000469796] The key objectives of this was to provide multidisciplinary support to HSC Trusts experiencing sustained or complex outbreaks or clusters of healthcare associated Covid-19 infections in acute settings with the aim of improving the safety of patients and staff while recognising that Infection Prevention and Control remained a core responsibility of provider organisations including Care Home and Trusts with appropriate expert health protection of this nature normally being provided by the PHA. The first meeting of the NSC took place on 2 December 2020 [see Exhibit INQ000185385]. A Visiting Subgroup of the NSC was established and included membership from the Department, the RQIA and the Department of Finance Estates. The Subgroup was and tasked with undertaking a series of multi-disciplinary visits to acute hospital across NI to offer a 'fresh eyes approach' to executive and operational teams in HSC Trusts regarding their respective work programmes to prevent, mitigate and manage the impact of nosocomial Covid-19

infection. The Subgroup was also tasked with identifying areas of good practice, as well as areas requiring attention and/or further improvement. The Subgroup also undertook to identify and share learning emerging through the pandemic response delivered by HSC Trusts to the point they received a visit. The work of the Subgroup was in addition to the independent assessment by the RQIA.

472. Epidemiological surveillance of nosocomial infection was central to infection management. A data model was developed to provide data, informatics and analytical capability to the Cell. This allowed infection outbreaks in hospital settings to be rapidly identified, and assisted decision making in Trusts in managing such outbreaks. This resulted in the development by the Department of a "Covid-19 nosocomial dashboard" which provided Trusts with close to real time access to data on Covid-19 infections that had arisen in hospital settings through reporting of bed capacity, patients, staff and resources, as well as modelling infection progression in and out of hospital sites. This was used to support infection prevention and control and the management of outbreaks. The intelligence generated was used by Nosocomial Support Cell to support HSC Trusts experiencing an outbreak and to agree additional measures to strengthen the prevention, and mitigation of risks of transmission of Covid-19 in hospitals. This work subsequently transferred into the PHA [Exhibit **INQ000442820**

473. Similarly additional training and support was provided to the Care Home sector from organisations including the HSC Trusts, the PHA supported by RQIA, the Clinical Education Centre, the Northern Ireland Social Care Council, and the work of the CNO and the CSWO. This training and support covered a range of issues including: the effective use of personal protective equipment (PPE); infection prevention control (IPC) measures; staff self-testing; and swabbing of residents. The Departmental Covid-19 Testing in Care Homes – Task and Finish Group [Exhibit INQ000137355] was established at my request to provide direction and guidance to support the development and implementation of Covid-19 testing arrangements within care homes. It also more generally provided advice on testing to social care policy leads within the Department and included active participation from the Public Health Agency and the Regulation and Quality

Improvement Authority. The Task and Finish Group met for the first time on 8 May 2020.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

474. In NI the Business Services Organisation's Procurement and Logistics Service (BSO PaLS) is responsible for NI's HSC equipment supply chain and procurement activity on behalf of HSC Trusts. As part of the UK Pandemic Influenza Preparedness Programme (PIPP), the Department's Emergency Planning Branch holds manages PIPP stockpiles for use in an emergency, which act as a buffer to the HSC normal supply chain. These stockpiles include medicines such as antivirals and antibiotics as well as clinical consumables and PPE including gloves, aprons, gowns, facemasks, visors and eye protection. During the initial response to the pandemic, the four UK countries worked closely together regarding management of PIPP stock, with Public Health England leading on 'Just in Time' contract negotiations. There was a significant and intensified demand for Personal Protective Equipment (PPE) across all HSC settings at a time when the global supply chain was experiencing extreme pressure due to the huge uncertainties associated with a ban on the export of PPE by China, a leading global supplier.

475. In February and March 2020 issues were being escalated to the Department around the supply and availability of PPE, both within HSC Trusts, but also within parts of the HSC which would normally not use PPE daily, for example, Community Pharmacies or those who would normally source their own supplies, such as GP practices and dentists and the Independent Sector (Care Homes). Given the critical need for PPE, a decision was taken on 23 March 2020 to establish a distinct PPE Strategic Supply Cell. The aim of the PPE Strategic Supply Cell was to prioritise the supply and distribution of PPE for the HSC and improve the robustness of the decision-making at the appropriate level. While I was not directly involved, and I had no role in providing advice on the adequacy or suitability of PPE with reference to age, sex, race, disability or relevant facial characteristics. I was however also aware of concerns that were being raised around operational issues concerning the number of staff failing the fit-testing of

masks due to the range of products being supplied [Exhibit INQ000120710]. Neither I nor CMOG had any direct role in directing fit testing requirements which remained an operational responsibility of HSC Trusts. I was aware that on a precautionary basis an audit and review of fit testing for respiratory masks was carried out across the HSC system after it emerged that an independent contractor had inadvertently applied on some occasions a fit-testing setting not normally used in Northern Ireland. The Department asked the Public Health Agency to undertake a Serious Adverse Incident review and implement the recommendations to ensure learning from this incident. As discussed at paragraph 463 the requirements for all relevant organisations including HSC Trusts to provide appropriately fitting Respiratory Protective Equipment (RPE) are set out in the Control of Substances Hazardous to Health Regulations 2002 (COSHH (as amended)). This includes taking account of differing facial characteristics. Associated information sheets and guidance is available in the COSHH essentials to assist employers' compliance with respiratory protective equipment to control exposure to any hazard substance including infectious agenda and to protect workers' health. This guidance to Trusts is available on the Health and Safety Executive NI (HSENI) website and is a statutory requirement of Trusts [Exhibit INQ000408195]. The Department still awaits the outcome of that Serious Adverse Incident but, at the time of writing, the Public Health Agency has confirmed that the report has been received by the external panel and is under consideration in the PHA prior to submission to the Department.

476. The PIPP stockpiles as indicated in paragraph 474 were not intended as a replacement for the normal HSC supply chain and were only ever meant to tide the Department and HSC Trusts over in an emergency, until such time as normal supplies could be replenished or resume. Volumes of stock held in the PIPP stockpiles represent the "Just in Case" (JIC) element of the PIPP stockpile, with the intention that these stocks would be supplemented with "Just in Time" (JIT) procurement of additional stocks through the normal supply chain, if required during a pandemic or any other emergency. During the Covid-19 pandemic the supply chain was unable to be replenished due to downturn in manufacturing of PPE in China, which had a world-wide impact.

477. The state of the global market for PPE supply was extremely volatile, and securing PPE supplies for NI health sector was very challenging. This had a significant adverse impact on those parts of the wider health provision such as dentistry and the care home sector which normally had autonomy for their own procurement of PPE. The Emergency Planning Branch retained overall responsibility for the release of Pandemic Influenza Preparedness Programme (PIPP) stocks and in the course of the pandemic it was necessary to release a significant amount of our PIPP stocks to BSO PaLS to enable it to supply the needs of HSC Trusts, as well as to support the PPE needs of adult social care homes, domiciliary care providers, GPs, community pharmacists, and urgent dental services given the policy decision by the Health Minister to support these health and social care providers. Requests for release of PPE from the PIPP stockpile were considered by the head of EPB and the Director of Population and the DCMO before final approval by me as CMO. To the best of my knowledge all PPE stock released from PIPP stocks met the minimum standards required for Covid-19 at the time that the stock was released.

478. The approach taken to address the issues raised, particularly around supply, was to explore every viable channel both locally and internationally to procure PPE. A focus was also placed on maximising the opportunities to strengthen the local supply position and the repurposing of local manufacturing which was investigated with Invest Northern Ireland (the investment and trade arm of the Department for the Economy), and which supported engagement with businesses in this area. Whilst the HSC procurement lead, the Business Services Organisation had ultimate responsibility for procuring PPE, and their efforts were strongly supported by the PPE Strategic Supply Cell and the Construction and Procurement Delivery Division of the Department of Finance (responsible for leading on the procurement of PPE for the non-health sector). The three parties engaged on a near daily basis during this period to ensure efforts were co-ordinated and that opportunities were explored to source PPE locally and internationally.

479. Given the significant volume of approaches to government by potential manufacturers to supply PPE, a process was put in place in early April 2020 where all offers of help were channeled through the Department of Finance, which undertook a first level triage before directing suitable offers to the Business Services Organisation or elsewhere as appropriate. The Department, the Department of Finance and the Business Services Organisation also worked in collaboration with The Executive Office to successfully purchase significant stock directly from China. This purchase was through a company which was identified by the NI Bureau and Invest NI in China, and which had been approved by the Chinese government to export PPE.

480. At a UK level, there was engagement with the other jurisdictions through a range of fora. The Department worked closely with them on all aspects of the UK-wide PPE Action Plan which was published on 10 April 2020 [Exhibit INQ000050008]. The plan was set around three strands; guidance, distribution, and future supply, which was aimed at ensuring that everyone got the PPE they needed. This engagement allowed for a collaborative working arrangement which included mutual aid, whilst enabling each nation to continue with its own procurement plans. In addition to pursuing all potential supply avenues, at an early-stage efforts were focused on arrangements to address confidence in supply and to support the management of demand in HSC Trusts ensuring a more even distribution of stock across all HSC sites [see Exhibit INQ000120711]. Other important aspects of these efforts were to enable the provision of PPE to the Independent Sector by their local HSC Trust and to assess the level of immediate and forecasted demand. As CMO I participated in strategic level discussions at UK CMO meetings and UK Senior Clinicians meetings concerning regular review and updates to the UK wide IPC guidance which included advice on the most appropriate PPE in particular clinical circumstances in keeping with emerging evidence and risk assessment.

480.1 While not directly involved, it was my understanding that the introduction of a revised process for Health and Social Care Trusts to order personal protective

equipment on the High Demand Management List, i.e. those items which were in high demand, took effect from 24 March 2020. The revision saw the introduction of a centralised system with nominated Trust contact points for managing the ordering and delivery of products, a move away from authorisation at ward level, with the aim of ensuring a more even distribution of stock across all Health and Social Care sites. The process was introduced in recognition of the significant issues being experienced at that time globally in the procurement of personal protective equipment and was to ensure that available stock was evenly distributed across the region whilst also enabling Health and Social Care Trusts to continually review and prioritise the distribution of its available stock.

480.2 I understood and was aware of arrangements during March 2020 for the provision of personal protective equipment to the independent sector through nominated points of contact within Trusts where they were unable to source their own supplies [Exhibits NQ000353606 INQ000353600 and INQ000120717] was also introduced. A reporting mechanism was introduced from the week ending 11 April 2020 whereby each Trust reported to the Department on the volumes of personal protective equipment they provided to the independent sector – Care Homes and Domiciliary Care on a weekly basis [Exhibits INQ000417493 and INQ000417495]. Reporting and collation of this information concluded on 31 March 2023.

PPE Stock

481. While I was not directly involved, initial modelling was undertaken by the HSCB in late March 2020 to inform the demand for PPE. The modelling looked at PPE demand across hospital, community, and primary care settings at extreme surge and worst-case scenario [see Exhibits INQ000130316, INQ000120794, INQ000120795, and INQ000120796]. I understand that while the BSO did use this information in conjunction with revised guidance on PPE requirements published in April 2020, to develop demand planning based on envisaged usage, there was a recognised need for a more dynamic approach. I am told that led to the development of a Health Resource Demand Model, which was aimed at

predicting and managing key resources, including the production of regional PPE demand estimates which were then used to inform Business Services Organisation's procurement strategy. Along with other Department colleagues I received regular updates from this approach.

PPE Review

482. In April 2020, I advised the Health Minister of the need to commission a rapid review of PPE by the Department's Internal Audit to focus on an assessment of readiness for continuing the response in the immediate response to the pandemic, and by way of preparation for a second wave, and possibly further waves of Covid-19. I considered the rapid review both necessary and appropriate as part of prudent preparation and planning in the context of the ongoing pandemic and to ensure relevant learning was identified. On 15 April 2020 the Health Minister commissioned [Exhibits INQ000120712, INQ000120813, INQ000120814] a rapid review of PPE to focus on the appropriate receipt, storage, distribution, and use of PPE across the HSC system. The terms of reference for the Rapid Review included an assessment of readiness for continuing response during the pandemic wave at that time and by way of preparation for a second wave of Covid-19.

483. A Review Panel led by the Department's Internal Audit carried out the Rapid Review with input from across the HSC system. The final report was submitted to the Health Minister on 14 May 2020 [Exhibits INQ000130338, INQ000120815, INQ000120816, INQ000120817, INQ000120820, INQ000120821, INQ000120822, INQ000346690].

484. The Review made 19 recommendations for the short-term improvement of the PPE position, which was in preparation for a second wave of Covid-19. The review identified seventeen associated actions in order to implement the nineteen recommendations. The actions were assessed as either Critical (to be completed within 2-4 weeks) or Essential (to be completed within 4-8 weeks). A lead official was identified as being responsible for their implementation [Exhibit INQ000120714]. Progress on the actions were monitored by the PPE Strategic

Supply Cell, and whilst the majority of actions were completed in a timely manner, the initial timeframe for completion proved challenging given the nature of some of the actions. Of the 17 actions, 15 actions were considered closed by end of August 2020 prior to the commencement of the second wave which was the primary objective and timeline consideration, and all were considered closed by December 2020. The two actions which took longer to close were in relation to the appropriateness of the reuse of PPE in a period of critical shortage in line with expert scientific advice and the development of systems to enable feedback from end users around the quality of PPE across all HSC and Independent Sector which could be used to better inform procurement. Both actions required the lead owner, the PHA, to engage with key stakeholders and develop supporting products which impacted on the overall timeline.

485. In October 2020, the NIAO, contacted the Department advising that it wished to undertake a review of PPE Distribution and Procurement. This was in line with similar reviews undertaken by other audit agencies in the other UK jurisdictions. The NIAO review commenced on 25 March 2021, and they published their report 'NIAO Report on 'The COVID-19 pandemic: Supply and procurement of Personal Protective Equipment to local healthcare providers' (the NIAO Report) on 1 March 2022. The NIAO Report identified six areas of learning, and these have all been considered by the Department and its relevant Arms' Length Bodies. The Department and its Arms' Length Bodies had all taken action in relation to the learning points in the final report, most of which were already addressed by the time the final report was published.

CONCLUSION

486. The response across the entire health and social care system in NI during the pandemic was simply remarkable and perhaps it can never be fully appreciated the commitment, dedication, and sacrifice of the many which I observed at first hand and was personally and professionally aware of including the efforts of my friends, colleagues and own immediate family as doctors, nurses, and medical student volunteers in the most challenging of circumstances. It is undoubtedly the case that this commitment and dedication saved many lives, maintained

essential health and social care services and despite the gloves, face coverings and visors, behind all of this this there were care providers who continued to deliver care compassionately and empathetically to the best of their ability with hearts, hands and minds. I am both proud and humbled by their selfless professionalism and dedication throughout the response and to all we owe a huge debt of gratitude.

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.

Personal Data

Signed: _____

16 April 2024

Dated: _____

Annex A: Exhibits Schedule for the Witness Statement of Professor Sir Michael McBride

Exhibit Reference	Unique ID	Paragraph(s)
M3/MMcB/01	**INQ000203933**	9, 59, 65, 68-69, 72-73, 95, 100, 110, 134, 169, 170, 182, 187, 209, 299, 303. 309, 310, 319, 342, 345, 410, 422, 443, 450, 457-460
M3/MMcB/02	INQ000137414	10
M3/MMcB/03	INQ000137413	10
M3/MMcB/04	INQ000408120	13
M3/MMcB/05	INQ000408121	13
M3/MMcB/06	INQ000408122	13
M3/MMcB/07	INQ000184662	18, 33.3
M3/MMcB/08	INQ000103626	23
M3/MMcB/09	INQ000469766	23
M3/MMcB/10	INQ000103599	23
M3/MMcB/11	INQ000103627	23.1
M3/MMcB/12	INQ000137322	23.2
M3/MMcB/13	INQ000137323	23.2
M3/MMcB/14	INQ000425510	23.2
M3/MMcB/15	INQ000103633	25, 42
M3/MMcB/16	INQ000103631	26
M3/MMcB/17	INQ000188763	27
M3/MMcB/18	INQ000188764	27
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