UK COVID-19 Inquiry: Module 1 - Rule 9 Request to the Department of Health - Reference: M1/CMOCSANI/1

CMO STATEMENT

Witness Name:
Statement No.:
Exhibits:
Dated:

UK COVID-19 INQUIRY

WITNESS STATEMENT OF:
Prof Sir Michael McBride
Chief Medical Officer
Department of Health, Northern Ireland

UK COVID-19 PUBLIC INQUIRY

MODULE 1 RULE 9 REQUST – REFERENCE M1/CMOCSANI/1

DEPARTMENT OF HEALTH (NI)

WITNESS STATEMENT OF PROFESSOR SIR MICHAEL McBRIDE

1. I, Professor Sir Michael McBride, Chief Medical Officer for Northern Ireland, make this statement in response to the request from the UK Covid-19 Public Inquiry ("the Inquiry"), dated 6 December 2022 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 1. In preparing this statement, I have consulted extensively with, and drawn upon the expertise of, the Department of Health's Chief Scientific Advisor, Professor Ian Young.

Scope of this statement

2. The focus of my statement is on the scientific, technical and medical advice and support which the Department of Health (DoH) received and provided to decision makers in relation to planning and preparedness for emergencies, and the roles of the Chief Medical Officer and Chief Scientific Adviser for Northern Ireland in that context.

3. To avoid duplication, this statement does not cover the totality of preparedness planning and response undertaken by the Department as a whole (referred to as HEALTH GOLD when in emergency response mode). This is covered in detail in the Corporate Statement to a separate Module 1 Rule 9 Request [Reference M01/NIDOH/01 and M01/HSCNI/01] which, I contributed to, given my role and responsibilities as CMO. Nor does it cover the details of planning undertaken by the Public Health Agency (PHA), the then Health and Social Care Board (HSCB) and the Business Services Organisation (BSO) which collectively make up HEALTH SILVER planning and response structures when activated in an emergency response. The statement also does not cover the details of planning and response undertaken by the five Health and Social Care (HSC) Trusts, which collectively make up HEALTH BRONZE planning and response structures when activated. I will however at times refer to these roles and outline them briefly where appropriate to aid understanding.

4. This statement does not cover planning and preparedness undertaken by The Executive Office (TEO) which leads on non-health emergency preparedness planning by the Northern Ireland government departments – this is covered in more detail in the Department's Corporate Statement to the Module 1 Rule 9 Request. In addition, TEO is itself a Core Participant to the Inquiry, and subject to its own Rule 9 requests. This statement does not cover the remit of the Northern Ireland Executive or its Ministers, save for those instances where I summarise or describe how I and/or the Chief Scientific Advisor interacted with them in support of the Health Minister in the provision of health advice to aid their decision-making.

5. Finally, this statement does not cover decision-making during the period of the Covid-19 outbreak itself, which is the subject of Module 2C.

Structure of statement

6. I have structured my statement as follows:

- Part 1: Scientific, technical and medical expertise within the Department of Health
- Part 2: UK expert groups and external sources of advice
- Part 3: Inter-organisational cooperation
- Part 4: Pandemic preparedness
- Part 5: Lessons Learned

Part 1: Scientific, technical and medical expertise within the Department of Health

The role of the Chief Medical Officer

7. I am the Chief Medical Officer (CMO) for Northern Ireland and was appointed to this role in September 2006. As CMO, I am accountable to both the Minister for Health and the Department's Permanent Secretary. My role is to provide independent, professional medical advice to both the Minister and Permanent Secretary. It is their prerogative as to how they factor that advice into their decisions. While I am accountable to the Minister, my professional advice remains, at all times, independent of political considerations or influence.

8. As set out in the Department's response in the Module 1 Corporate Statement, the Department of Health is one of nine departments, which comprise the Northern Ireland Executive. The Department's statutory responsibilities under the Health and Social Care (Reform) Act (Northern Ireland) 2009 are to promote an integrated system of health and social care (HSC) designed to secure improvement in the physical and mental health of people in Northern Ireland; the prevention, diagnosis and treatment of illness; and the social wellbeing of people in Northern Ireland.

9. The Department discharges these responsibilities, both by direct departmental action and through its Arm's Length Bodies (ALBs), by 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 its ALBs; and promoting a whole system approach.

10. The work of the Department is structured into Groups. I am responsible for leading the Chief Medical Officer Group and am a member of the Department's senior leadership team, the Top Management Group (TMG). I have a wide range of roles, which includes

professional, executive and leadership responsibilities. During the time period in question, (between June 2009 and January 2020, the pre-pandemic period), the CMO Group consisted of:

- two Deputy Chief Medical Officers (DCMOs) – currently Dr Naresh Chada and Dr Lourda Geoghegan, and a small team of medical advisors who provided professional medical advice and support to me and policy teams within both my Group and the wider Department;
- Population Health Directorate;
- Quality, Safety & Improvement Directorate;
- the Chief Pharmaceutical Officer, Mrs Cathy Harrison, and the Pharmaceutical Advice and Services Directorate;
- the Chief Dental Officer, Mrs Caroline Lappin;

and the following chief professional officers who provided support and advice to me on their respective areas of expertise:

- the Chief Environmental Health Officer, Mr Nigel McMahon; and
- the Chief Scientific Advisor, Prof. Ian Young.

11. The CMO Group, through the Population Health Directorate (PHD), had responsibility for public health policy including health protection, which includes vaccination and screening policy, infectious diseases prevention and control, and health improvement policies. As CMO, in addition to being the medical profession lead in the Department, I also hold overall corporate responsibility for emergency planning, preparedness and response for the health consequences of both civil emergencies and infectious diseases/pandemics in keeping with the role described within the Emergency Response Plan (ERP) [Exhibit INQ000184662].

12. The CMO Group also acts as sponsor branch to two ALBs – namely the Public Health Agency (PHA), which is responsible for the operational implementation of public health policy and in leading on the operational response to outbreaks of infectious diseases; and the Regulation and Quality Improvement Authority (RQIA), which is the independent body responsible for monitoring and inspecting the availability and quality of health and social care services in Northern Ireland, and encouraging improvements in the quality of those services.

13. The PHA played a pivotal part in the overall response to the pandemic, and I worked very closely with public health colleagues in the PHA, who provided professional advice and support in coordinating the public health response, and in some instance led elements of the response at my request and on behalf of the Department.

14. In my role as CMO, I also provide professional leadership to the medical profession in Northern Ireland.

Key experts involved in science/medicine/public health in the Department

15. In my role as CMO and Head of the CMO Group I have a number of professional medical, technical and scientific advisors who support me, and through me, provide expert advice and analysis to the Minister and Permanent Secretary. These advisors are detailed in the paragraphs below and illustrated in Exhibit INQ000183437. The predecessors for all post holders and dates when they held office are detailed in Exhibit INQ000183438.

Deputy Chief Medical Officers (DCMOs)

16. Supporting me in my role as CMO and Head of Public Health are two Deputy CMOs, currently Dr Naresh Chada and Dr Lourda Geoghegan.

17. Dr Naresh Chada was appointed to the post of DCMO Public Health in April 2019, having previously held the position of Senior Medical Officer in the Department (from October 2001 to March 2019) with responsibility for advising on, inter alia, planning and preparedness for a civil/chemical, biological, radiological and nuclear (CBRN) emergency. Reporting to me, Dr Chada is responsible for management and policy oversight of Population Health Directorate and for providing public health advice, which includes ensuring that all necessary action is taken to protect public health and to learn lessons from outbreaks, incidents and inquiries. During the pandemic Dr Chada was the senior responsible officer for the Covid-19 vaccination programme, in addition to holding other significant responsibilities. Dr Chada's predecessors in this role included Dr Lorraine Doherty, Dr Anne Kilgallen, Dr Elizabeth Reaney and Dr Elizabeth Mitchell [see Exhibit INQ000183438 for further details regarding dates when they held office].

18. Dr Lourda Geoghegan was appointed to the post of DCMO Safety and Quality in June 2020, having been on-loan to the Department from the RQIA from March 2020 to May 2020 to support the Covid-19 response. Dr Geoghegan previously held the positions of Medical Director of the Regulation and Quality Improvement Agency (from January 2017 to May 2020) and was a Consultant in Public Health/Health Protection in the PHA from (October 2009 – December 2016). Dr Geoghegan's predecessor in the DCMO role was Dr Paddy Woods [see Exhibit INQ000183438 for further details regarding dates when he held office].

19. Reporting to me, Dr Geoghegan is responsible for safety, quality, and clinical governance standards and medical policy, which includes providing professional advice to policy

colleagues in relation to lessons learned and recommendations emerging from incidents and inquiries. Dr Geoghegan, like Dr Chada, had many significant responsibilities during the pandemic response which included chairing the Care Home Task and Finish Group and overseeing the establishment of the Nosocomial Cell and development of the Nosocomial Dashboard to assist Health and Social Care Trusts with healthcare associated outbreaks of Covid-19.

20. Drs Chada and Geoghegan worked closely with the former and current Director of Public Health in the PHA and a range of PHA Public Health consultants on the provision of public health advice and communications, and on the response to emergencies and infectious diseases. In addition, Dr Geoghegan also assumed a range of different responsibilities during the Covid-19 pandemic.

Senior Medical Officers/Medical Officers (SMOs/MOs)

21. In addition, a number of medical and senior medical officers supported the work of the two DCMOs.

Chief Scientific Advisor (CSA)

22. Professor Ian Young was appointed to the post of Chief Scientific Advisor (CSA) to the Department in November 2015. Reporting to me, the CSA provides scientific advice and analysis to me and the Health Minister across a range of public health and social care issues. The CSA also works closely with other Chief Professional Officers in the Department on topics and health policies of mutual interest. The CSA role is part time, with the total commitment equating to three days per week. However, during the Covid-19 pandemic this increased to a full-time commitment from 23 March 2020 until early 2022.

23. The CSA has specific and exclusive responsibility for research and development. In executing this responsibility, the CSA works closely with staff in the PHA's HSC Research and Development Division and HSC Trusts' Directors of Research. The CSA provides input and advice on a number of areas to policy colleagues, particularly in relation to genomics and rare diseases. The CSA is also Head of Profession for the Healthcare Science Workforce (Chief Scientific Officer role).

24. During emergencies, in my role as CMO and assisted by the CSA, I am required to provide public health and scientific/medical/technical advice to the Health Minister, which also can form part of the Minister's advice to the NI Executive, to inform its decisions.

25. The NI Executive does not have a general CSA, meaning a CSA unattached to any specific government department or policy brief. There are two Departmental CSAs in NI – one in the Department of Health (described in paragraphs 22-24) and one in the Department of Agriculture, Environment and Rural Affairs (DAERA). Each CSA has a specific policy brief and provides advice to their respective Ministers. The Department's CSA and the DAERA CSA are in regular communication on a range of issues. Advice is provided via relevant Ministers to NI Executive decision makers on request, but there had been no requests for scientific advice to the NI Executive in the period following the current CSA's appointment (in 2015) up to the beginning of the pandemic.

26. The DAERA CSA, by agreement, has acted as point of contact with the UK CSA Network, passing relevant papers to the Department's CSA. NI is not large enough to have a CSA Network of its own. Requests by both NI CSAs to be part of the UK Network had been declined. The Department's CSA meets regularly in a variety of contexts with Health CSAs from the other UK nations. There are no formal arrangements for contact between other members of the Government Scientific Experts (GSE) professions in the NI Executive.

27. Health and Social Care Research is led and directed by the CSA through the Research and Development (R&D) Division of the PHA. The current R&D strategy ("Research for Better Health and Social Care") (see Exhibit INQ000183439) sets out the Department's commitment to support research, researchers and the use of evidence from research to improve the quality of both health and social care and for better policy-making. It identifies high-level priorities and delivery mechanisms, which were developed in consultation with a wide range of stakeholders. The R&D Division funds research infrastructure and a range of research programmes, and works closely with other stakeholders and delivery bodies in NI, UK and Ireland to co-ordinate activities. This allows a flexible response in response to policy needs and questions as they arise. In addition, research objectives feature in a variety of other Departmental strategies (for example, the Cancer Strategy and the Mental Health Strategy amongst others), and there are separate strategies for some professional groups (for example, social workers and allied health professionals).

Chief Pharmaceutical Officer (CPO)

28. Cathy Harrison is the Chief Pharmaceutical Officer (CPO) for Northern Ireland, appointed to the role in January 2019. The CPO reports to me and, as a qualified pharmacist, is the most senior professional advisor on medicines and pharmaceutical matters, accountable to both the Minister for Health and Permanent Secretary. The CPO is also the head of the pharmacy profession in Northern Ireland, responsible for strategic leadership, planning and decision making to deliver the optimal contribution of pharmacy professional practice to the population's health. The CPO leads and advises on all areas of medicines and pharmaceutical policy, and related legislation. The CPO represents Northern Ireland's interests at a UK level in the UK Medicines Supply programme, which oversees all aspects of medicines continuity, working with senior officials from the Medicines and Healthcare products Regulatory Agency (MHRA), DHSC and the Devolved Administrations. The CPO also led the Department's response to EU transition, responsible for advising the Minister on Executive matters relating to EU medical supplies. Previous CPO post holders and dates when they held office are detailed in Exhibit INQ000183438.

Chief Nursing Officer/ Deputy Chief Nursing Officers (CNO/DCNOs)

29. Reporting directly to the Permanent Secretary, Maria McIlgorm was appointed Chief Nursing Officer (CNO) to the Department in March 2022. The CNO is directly accountable to the Permanent Secretary and to the Minister for the provision of professional advice and statutory functions. Previous CNO post holders and dates when they held office are detailed in Exhibit INQ000183438.

30. As the Department's most senior advisor on nursing and midwifery issues, and as Head of Profession, the CNO is responsible for the professional leadership, performance and development of the professions in NI, including providing support to the Department's Lead Allied Health Professions Officer. This involves providing expert and authoritative professional advice and support to the Minister, Permanent Secretary, senior colleagues and other Departments on all aspects of policy relating to the relevant professions. As a member of the Departmental Board and a Head of Profession, the CNO is responsible for collective decision-making on cross-cutting and strategic issues. These include the development and review of key policies, ensuring adherence to statutory commitments, including during an emergency.

31. The CNO is supported in her role by two Deputy Chief Nursing Officers (DCNOs), Mary Frances McManus (appointed in November 2021) and Lynn Woolsey (appointed in January 2022). Previous DCNO post holders and dates when they held office are detailed in Exhibit INQ000183438. The CNO has monthly business meetings with the Directors of Nursing in the PHA and the five HSC Trusts to facilitate:

- the sharing of information and provision of advice between attendees on matters relating to the nursing, midwifery and Allied Health Professionals (AHP) professions;
- the identification of key issues facing Nursing, Midwifery & AHPs across all healthcare organisations in Northern Ireland; and
- shaping Departmental policy, across a wide range of policy areas to which Nursing, Midwifery and AHPs contribute.

32. In addition the CNO and her staff worked closely with the Director of Nursing in the PHA on the provision of advice and communications to the public, and on the response to the pandemic.

Specialist Advice

33. Where specific specialist advice is required that is outside the area of expertise of internal experts or the team of Medical Advisors in the Department, I can secure external expert advice – this can range from commissioning advice from the Public Health Agency, from other Health and Social Care (HSC) organisations, from academia or, if necessary, from experts outside of Northern Ireland, including from other specialist advisory groups in the UK.

Other key offices/people within the Department

Minister

34. In his/her ministerial role, a Minister shall exercise the functions assigned to the Ministerial office that they hold and have full executive authority within any broad programme agreed by the NI Executive and endorsed by the NI Assembly, and in accordance with the requirements of the NI Executive Ministerial Code (see Exhibit MMcB5005). The functions of a department are at all times exercised subject to the Minister's direction and control as per Article 4 of the Department's (Northern Ireland) Order 1999. Ministers are accountable to the NI Assembly for the decisions and actions of their departments and agencies, including the stewardship of public funds and the extent to which key performance targets and objectives have been met. Ministers must adhere to the Ministerial Code. The Health Minister is required to bring matters deemed crosscutting, significant or controversial to the NI Executive (paragraph 2.4 of the Ministerial Code).

35. Robin Swann MLA of the Ulster Unionist Party (UUP) was appointed Minster for Health on 11 January 2020, following the NI Executive being reformed after almost three years of being in abeyance. Details of previous Ministers for Health who held office in the proposed date range are detailed in Exhibit INQ000183438.

Special Adviser

36. A Special Adviser (SpAD) is a political appointment made by the Minister and, in general a SpAD works closely with civil servants to deliver the Ministers' priorities. The SpAD is however not a civil servant. They assist the Minister on matters where the work of government and Ministers' party responsibilities overlap and where it would be inappropriate for civil servants to become involved. They are an additional resource for the Minister, providing advice from a standpoint that is more politically committed than would be available to a Minister from the Civil Service. SpADs stand outside the departmental hierarchy but work collaboratively with civil servants in supporting the Ministers who have appointed them and the Executive as a whole. SpADs can on behalf of their Minister, convey the Minister's views, instructions and priorities to officials including on issues of presentation. In doing so, they must take account of any priorities Ministers have set; request officials to prepare and provide information and data for Ministers, including internal analysis and papers; and review and comment on – but not change, suppress or supplant – advice submitted to Ministers by civil servants.

37. Mark Ovens held the post of Special Advisor to Minster Swann from 11 January 2020. Details of previous Special Advisors to the Minister for Health who held office in the proposed date range are detailed in Exhibit INQ000183438.

Permanent Secretary

38. The Department of Health (the Department) is headed by a Permanent Secretary, with this role undertaken for a significant part of the period covered by this statement, by Richard Pengelly, CB, who was in post from July 2014 until April 2022.

39. In April 2022, Peter May took up post as Permanent Secretary for the Department of Health and HSC Chief Executive. Peter May had previously held Permanent Secretary positions in the Department of Justice, Department for Infrastructure and the Department of Culture, Arts and Leisure.

40. The role of the Permanent Secretary is as Principal Adviser to the Minister for Health and the Principal Accounting Officer for the Department, and HSC Chief Executive. Previous post holders and dates when they held office are detailed in Exhibit INQ000183438.

Director of Population Health

41. During the pre-pandemic period, the Director of Population Health was situated within CMO Group and reported through the DCMO Public Health to me. Elizabeth Redmond, a senior civil servant, has held this post since 2017. The Director had delegated responsibility for delivery of the Department's emergency planning, preparedness and response capability. Included within this role was responsibility for health protection, which included monitoring new and emerging infectious diseases, and the prevention and control of infectious diseases including a range of vaccination programmes, working closely with the Public Health Agency. The Director also led on Population Health Screening and Health Improvement Policy in NI. Previous post holders included Gerald Collins, Dr Gerard Mulligan and Andrew Elliott [see Exhibit INQ000183438 for further details on dates when they respectively held office].

42. It should be noted that these arrangements and responsibilities have recently been refreshed and are therefore no longer as outlined above, as is detailed more fully in Corporate Statement to Module 1.

43. Reporting to the Director of Population Health was the Head of Emergency Planning Branch (EPB) who had delegated responsibility for pandemic and civil emergency planning, preparedness and response. Since January 2023, responsibility for the Emergency Planning Branch has moved to the newly created Emergency Preparedness, Resilience and Response Directorate, led by a senior civil servant, Christopher Matthews.

Other medical professionals in the NICS

44. There are a number of medical professionals working within other government departments in Northern Ireland in addition to those in the Department of Health within the CMO Group who report to me as CMO given my professional and policy responsibilities.

45. There are a number of doctors working within the Department of Finance as part of the Northern Ireland Civil Service Occupational Health Service. The Occupational Health Service (OHS) provides a comprehensive occupational health service to the NICS departments and their agencies, and medical advisory services to a number of non-departmental public and Arm's Length Bodies. The OHS has its own reporting and accountability arrangements within the Department of Finance.

46. As Chief Medical Officer, under the Medical Profession (Responsible Officers) Regulations (NI) 2010, I am the Responsible Officer for doctors working within the Department, and by agreement with Permanent Secretaries of other departments, such as the Department of Finance, for doctors working within the ONS service. As part of that role I make recommendations to the General Medical Council (GMC) about the fitness to practise of doctors connected to me as their Responsible Officer (RO).

47. In practice this involves my considering a doctors annual appraisal documentation and the assessment of their appraiser before making a recommendation to the GMC in respect of their revalidation. I also act as the RO for the Director of Public Health in the PHA.

Planning for and responding to emergencies

Lead Government Department (LGD) role

48. As set out more fully in the Corporate Statement to Module 1, the Department is the Lead Government Department (LGD) for responding to the health consequences of emergencies – whether they arise from chemical, biological, radiological and nuclear (CBRN) incidents; disruptions to the medical supply chain; human infectious diseases (including pandemics); or mass casualty events. Consequently, the Department was responsible for leading the health response to the Covid-19 pandemic [see Exhibit INQ000183440].

49. The Executive Office (TEO) is responsible for leading civil contingencies preparedness and response, as well as the non-health pandemic planning and the wider consequence management in Northern Ireland, including the management of excess deaths. TEO is also responsible for co-ordinating both health and non-health advice to the Northern Ireland Executive, to assist Ministers in making decisions which are cross-cutting in nature.

50. Under the Northern Ireland Civil Contingencies Framework – originally published by TEO in 2011 – the Department is required to maintain, review and update an Emergency Response Plan, to test and exercise the plan's response arrangements to ensure the Department's ability to deliver an effective response.

51. The Department also provides strategic health and social care policy advice and/or direction to its associated HSC agencies and ALBs in response to emergencies for which it has been designated lead. In such circumstances, the Minister for Health leads, directs

and co-ordinates the response for Northern Ireland, reporting to the NI Executive under the Northern Ireland Central Crisis Management Arrangements (NICCMA) – led by TEO – when an emergency has been categorised as Serious or Catastrophic, and requires a cross-departmental or cross-governmental response.

Emergency Response Plan (ERP)

52. As detailed in the Department's ERP, which is described in more detail in the Corporate Statement to Module 1, the Department is responsible for leading and co-ordinating the health response when an emergency has been categorised as serious or catastrophic and requires a cross departmental or cross-governmental response. The severity and complexity of an emergency will dictate the level of involvement of the Department and if activation of HEALTH GOLD Command is required.

53. The Department and its experts will also be supported by experts in public health from the PHA, the commissioning leads in the then HSCB (now the Strategic Policy and Planning Group of the Department (SPPG)) and logistics and procurement leads in the BSO, collectively known as HEALTH SILVER Command.

54. Emergency planning staff in the Department work closely with HEALTH SILVER partners and HSC Trusts (collectively known as HEALTH BRONZE) to ensure planning and preparedness for health and social care is undertaken, and that the command and control structures are well articulated and exercised regularly to enable an effective, scalable response to any emergency.

The CMO role in an emergency

55. My role and that of the Department in an emergency is described in detail in the ERP and is covered in more detail in the Department's Module 1 Corporate Statement.

56. In response to any emergency (including a pandemic) my role as CMO is to provide professional and public health advice to the Health Minister, the Permanent Secretary, respective policy and professional colleagues in the Department, other government departments related to the emergency; and to lead and coordinate the public health response.

57. As CMO, I also have an important role in communicating with the public on key public health issues, as well as planned actions that are needed to protect the public and frontline HSC staff, minimise the impacts on the HSC services, and improve public health

and wellbeing. During emergencies, assisted by the CSA, I am required to provide public health, scientific, medical and technical advice to the Health Minister to inform both his and the NI Executive's decisions, on a wide range of issues. However, I would ask the Inquiry to note that Ministers and the NI Executive in general are not required to follow that advice. Sometimes Ministers will require further work to be undertaken in respect of a proposed course of action, in order to fully satisfy themselves before making a decision. On other occasions, Ministers may want to balance health advice against other factors/advice received from other government departments in order to come to an agreed position. This is their prerogative.

58. There is no specific role in relation to resilience and preparedness planning for the CSA, and in practice the CSA was not involved in these functions in any significant way prior to the Covid-19 pandemic. A dedicated team of emergency planning staff within Population Health Directorate, headed at Grade 5 level and reporting through DCMO Public Health to me as CMO, undertakes this work. More detail on this is provided in the Module 1 Corporate Statement, which looks at departmental emergency planning and preparedness generally. The CSA's role is as an advisor during the response phase of any emergency, to advise me and/or the Minister as required.

59. The roles that specialist staff such as the DCMOs, CSA and I undertake in an emergency will be broadly similar to our day-to-day responsibilities (except where re-deployed for a protracted health response). Therefore, there should already be a high level of understanding of the qualities, experience and information needs of the Health Minister, Departmental colleagues and key members of other partner and stakeholder organisations.

60. On a day-to-day basis, lead responsibility for planning and preparedness falls to the Director of Population Health at Grade 5 level, and to the Head of Emergency Planning at Grade 7 level. It is their responsibility to manage resources and funding to ensure the Department's preparedness and resilience functions. The Head of Emergency Planning has day-to-day responsibility for the management of Departmental budgets for pandemic and civil contingencies preparedness and to bid for resources annually to ensure that we have the necessary funding to fulfil our part of UK and local planning.

Part 2: UK expert groups and external sources of advice

61. In Northern Ireland I am provided with scientific, medical and technical advice and support from a range of sources, including from UK expert groups (via DHSC if there is no Departmental representative) and from NI experts. I will summarise these sources however further detail is contained in the DHSC Corporate Statement to Module 1 that has been disclosed to all Module 1 Core Participants and is numbered INQ000061508 and I will not duplicate that detail here.

UK sources of expert advice

Scientific Advisory Group for Emergencies (SAGE)

62. The Scientific Advisory Group for Emergencies (SAGE) is a UK group, which provides independent scientific advice to support decision-making in the Cabinet Office Briefing Room (COBR) in the event of an emergency. SAGE provides timely scientific and/or technical advice to decision makers to support UK cross-government decisions. SAGE is also responsible for coordinating and peer reviewing scientific and technical advice to inform decision-making. SAGE can only be activated by COBR; however, any of the Devolved Administrations can request assistance from the UK Government for securing or sourcing scientific and technical advice to help inform decision-making on issues within their statutory competence. SAGE is usually chaired by the UK Government's Chief Scientific Advisor.

63. Given its relatively small size, Northern Ireland does not have its own Scientific Advisory Group for Emergencies (SAGE) group but relies on the independent scientific advice provided by the UK group. NI representation at SAGE, either with observer or with participant status, is dependent on the nature of the emergency. For most of the Covid-19 pandemic, the CSA or deputy CSA attended SAGE as a participant. In the absence of NI involvement, summaries of SAGE views and discussions, in the form of minutes, were received by the CMO.

Scientific Pandemic Insights Group on Behaviours (SPI-B)

64. The Scientific Pandemic Insights Group on Behaviours (SPI-B) is an ad-hoc subgroup of the Scientific Advisory Group for Emergencies (SAGE), which is chaired by the Government Chief Scientific Adviser. SPI-B is an advisory group only. SPI-B reports directly to SAGE. SPI-B meets on an ad hoc basis as required for the duration of an outbreak. Officials from each of the Devolved Administrations may attend SPI-B or sub-group meetings as observers. Attendance of other observers will be at the discretion of the Chair and Secretariat. Policy officials may attend SPI-B or subgroup meetings where

they have an interest in the advice and views of the group, or to provide further context for discussion on specific topics.

65. The subgroup provides advice and a consensus view to SAGE on a range of behavioural science issues. SPI-B meetings are not minuted; however, the secretariat may draft a high-level summary, including actions, following meetings. The Department agreed that PHA would attend meetings on its behalf as an observer. The PHA shared papers with key colleagues in the Department on a regular basis so that they were apprised of all SPI-B activity throughout the pandemic. Papers were also available to DoH via SAGE.

Scientific Pandemic Influenza Group on Modelling (SPI-M-O)

66. The Scientific Pandemic Influenza Group on Modelling (SPI-M-O) is a subgroup of SAGE and gives expert advice to the Department of Health and Social Care and wider UK government on scientific matters relating to the UK's response to an influenza pandemic (or other emerging human infectious disease threats). The advice is based on infectious disease modelling, epidemiology, and potential implications for policy decisions.

67. The sub-group also provides expert advice to the Scientific Pandemic Influenza Advisory Committee (SPI), which advises Government on scientific matters relating to the health response to an influenza pandemic and will play a critical role in ensuring that the SPI, and through SPI, UK National Influenza Pandemic Committee (UKNIPC), and Ministers are properly assisted in the development of a set of flexible responses that cover (in an appropriate and feasible way) the whole range of anticipated risks.

68. Dr Elizabeth Reaney, a departmental SMO, represented the Department as both an Observer and Associate Special Member until 2013. Dr Declan Bradley PHA (a Consultant in Public Health medicine in the PHA) was appointed Deputy CSA (from January 2021 to April 2022) and was then the lead representative at meetings and received minutes of meetings during the Covid response. In 2022, SPI-M-O was reconstituted with wider terms of reference to cover all infectious diseases and met approximately every 6 weeks. The Department's CSA now attends with observer status.

Joint Committee on Vaccination and Immunisation (JCVI)

69. The Joint Committee on Vaccination and Immunisation (JCVI) is an independent statutory Advisory Committee established under the NHS (Standing Advisory Committees) Order 1981 (SI 1981/597). Its terms of reference, agreed by the UK Health Departments, are:
    - to advise UK health departments on immunisations for the prevention of infections and/or disease following due consideration of the evidence on the burden of

disease, on vaccine safety and efficacy and on the impact and cost effectiveness of immunisation strategies.

- to consider and identify factors for the successful and effective implementation of immunisation strategies.
- to identify important knowledge gaps relating to immunisations or immunisation programmes where further research and/or surveillance should be considered.

70. Over the period June 2009 to September 2015, a Senior Medical Officer (SMO) in the Department attended JCVI meetings as an 'invited observer' (initially this was Dr Elizabeth Reaney, followed by Dr Gillian Armstrong). While the Departmental representative was not a member of JCVI and did not have speaking rights at meetings, they did however receive papers and could contact the JCVI Secretariat with queries. In addition, the PHA Lead Consultant on vaccinations (initially Dr Lucy Jessop, followed by Dr Jillian Johnston) was able to attend the JCVI meetings as an observer, but they did not have access to the meeting papers nor have speaking rights at meetings.

71. From September 2015 to January 2020 (and onwards), the Devolved Administrations were invited to nominate a "Co-opted member" of JCVI. For Northern Ireland, the PHA's Lead Consultant on vaccinations was the nominated representative. They were invited to attend all main JCVI meetings and could provide advice/updates to JCVI members regarding the implementation of particular vaccination programmes. The Co-opted member could also be part of the JCVI sub committees, which looked in more detail into particular topics. In addition to the NI Co-opted member, the SMO or lead vaccination policy official could also attend the main JCVI meetings as an observer. They had access to the JCVI papers but had no speaking rights at meetings.

72. JCVI provides advice to all 4 UK health Ministers/Departments on vaccination and immunisation matters. It has a statutory role in England and Wales, while health departments in Scotland and Northern Ireland may choose to accept its advice. JCVI's draft recommendations and minutes of meetings are shared with relevant officials.

Advisory Committee on Dangerous Pathogens (ACDP)

73. The Advisory Committee on Dangerous Pathogens (ACDP) is an expert committee of the Department of Health and Social Care (DHSC). Its work cuts across a number of organisations, including the Health and Safety Executive (HSE), UK Health Security Agency (UKHSA) and the Department for Environment, Food and Rural Affairs (Defra). It provides independent scientific advice to the HSE, and to ministers through DHSC, Defra,

and their counterparts under devolution in Scotland, Wales and Northern Ireland, on all aspects of hazards and risks to workers and others from exposure to pathogens.

74. The Department has observer status on this group, and our nominated representative is the DCMO Public Health, Dr Chada, who receives papers from meetings and associated outputs. Minutes of the meeting are published online.

The Human Animal Infections and Risk Surveillance (HAIRS)

75. The Human Animal Infections and Risk Surveillance (HAIRS) group acts as a forum to identify and discuss infections with potential for interspecies transfer (particularly zoonotic infections). HAIRS contributes to the UKHSA infectious disease surveillance and monitoring system for animal and human health. The group is responsible for assessing any reported incidents and informing their respective departments/ agencies of significant potential threats.

76. The group is responsible for communicating conclusions and recommendations of their risk assessments, which are published on GOV.UK. These are communicated to the Advisory Committee on Dangerous Pathogens (ACDP) and the UK Zoonoses and Animal Diseases and Infections Group (UKZADI), the latter specifically only when there are implications for action. The Department is represented on this group by a Public Health Consultant, Philip Veal from PHA. Members receive the papers and minutes for HAIRS meetings that are held monthly. Each person is responsible for sharing that information with others in their agency as considered appropriate.

UK Zoonoses, Animal Diseases and Infections (UKZADI)

77. The UK Zoonoses, Animal Diseases and Infections (UKZADI) Group is an independent committee made up of experts from across the agricultural and public health departments. They provide a strategic overview to ensure overall co-ordination of public health action at the UK, national and local level with regard to existing and emerging zoonotic infections.

78. UKZADI enables effective join-up at a strategic level across UK Government and devolved administrations' public health interests. UKZADI also co-ordinates cross-departmental and intergovernmental action, contributing to effective and efficient protection of the public, with the aim of minimising the risk of disease outbreaks and the impact of any outbreaks that do occur.

79. UKZADI advises the four nations Chief Medical Officers and Chief Veterinary Officers and Food Standards Agency (FSA) on important trends and observations which impact on animal and public health including, where necessary, preventative and remedial action. The Department and the PHA are represented on this group; as is DAERA, and receive the minutes of meetings.

80. DoH and PHA are represented on this group and minutes were shared with relevant officials.

New and Emerging Respiratory Virus Threats Advisory Group (NERVTAG)

81. The New and Emerging Respiratory Virus Threats Advisory Group (NERVTAG) is an expert committee of the Department of Health and Social Care (DHSC), which advises their CMO and, through the CMO, ministers, DHSC and other government departments. It provides scientific risk assessment and mitigation advice on the threat posed by new and emerging respiratory viruses and on options for their management. The scope of the group includes new and emerging respiratory virus threats to human health including strains of influenza virus (regardless of origin), and other respiratory viruses with potential to cause epidemic or pandemic illness, or severe illness in a smaller number of cases. The group draws on the expertise of scientists and health care professionals, including clinicians, microbiologists and public health practitioners, and colleagues in related disciplines and is scientifically independent.

82. NERVTAG communicates its advice to UK health departments through the published minutes of Committee and Sub-committee meetings and statements produced by the Committee. Ministers or CSAs or Medical Advisors may request advice from the Committee directly. The Department attends NERVTAG meetings as an observer, and was represented during the Covid-19 pandemic.

Views on SAGE

83. SAGE provides the main source of scientific advice to UK Government and, where appropriate, NI Government in the event of an emergency. The advice and evidence provided by SAGE is developed by assessing and reviewing evidence from multiple different sources, and taking account of the views of a wide range of nationally and internationally recognised experts. SAGE is a forum which NI does not have the capacity to fully replicate; nor would it be scientifically or technically feasible, nor operationally warranted, to duplicate their work.

84. There is no automatic representation of NI on SAGE, as was apparent in the early stages of the Covid-19 pandemic. In the absence of NI involvement, summaries of SAGE's views and discussion (in the form of minutes) were received by NI. Therefore, policy makers in NI may have had more limited awareness of the extent to which uncertainty and a range of opinion is expressed in scientific discussions, if this was not fully captured in minutes. The same would largely be true of other UK Scientific Advisory Groups operating in emergencies in the absence of NI participation. The attendance of the NI CSA ensured that that policy makers were kept more fully aware of discussions relating to scientific uncertainty and the full range of opinions contributing to the consensus views of SAGE.

85. Local sources of expert advice can be stood up to interpret scientific advice from SAGE and elsewhere and to consider its applicability to NI and support decision making, depending on the emergency. As noted previously, NI would not be able to replicate the nature and type of UK advisory structures, given our size, scale and number of experts available. NI expertise can be drawn from a range of employing organisations (such as universities) and the involvement of appropriate experts facilitated by those organisations on a voluntary basis. This certainly happened during Covid-19 due to the good relationships that existed between the Department and the local Universities and there was no difficulty in sustaining engagement while the emergency persisted.

86. There is no doubt that involvement in a voluntary capacity places significant additional pressure on key individuals. The understanding of their employing organisations and willingness to make necessary adjustments is essential to maintaining this. In practice, given the small number of relevant partners in NI, the nature of the emergency and good relationships among stakeholders, this was not a problem on this occasion; however, this would need to be kept under review where an emergency response is protracted, as was the case here. Consideration is now being given to options to formalise partnership arrangements between the PHA and academic institutions as part of an ongoing organisational development review of the PHA.

87. An example of this during the pandemic was the establishment of a Strategic Intelligence Group (SIG) in April 2020, which was chaired by the CSA, and included members from Queen's University Belfast, Ulster University, the PHA and the University of Oxford, as well as Departmental experts, to provide advice and expertise to inform the HSC response [see Exhibits INQ000183441 and INQ000183442]. The Group considered scientific and technical evidence emerging from SAGE and other expert sources, alongside NI data on the local trajectory of the pandemic. The evidence and analysis considered by the Group informed my recommendations to the Minister to aid his decision-making.

Integration of expert advice

88. In line with the Department's LGD responsibilities, whether that is a civil emergency or an infectious disease outbreak/pandemic, I am responsible, with the support of the CSA, for formulating, coordinating and communicating independent professional medical and scientific advice. That advice is taken from a variety of sources, both local and UK advisory groups. I then provide advice to the Health Minister to inform decision-making.

89. As noted previously, my role and that of the CSA is to advise and support the Health Minister. It is not within our role to advise on, or try to balance, conflicting advice provided from other sources of expertise – such as the economic impacts of measures or advice from other government Departments to the NI Executive. Our focus is on protecting public health and managing the health consequences of the emergency.

90. Where an issue is cross-cutting and requires a NI Executive decision, the Health Minister shares the scientific and medical advice that the CSA and I have provided to him with NI Executive Ministers. In those instances I and/or the CSA would, where required, accompany the Health Minister to an Executive meeting to provide an oral briefing, and to clarify advice/answer any queries Executive Ministers might have.

91. During Covid-19, along with my DCMOs and team of medical advisors, the CSA and a range of Departmental policy officials, I also attended a range of strategic UK level fora and groups to keep myself and my team fully informed and to ensure NI's interests were fully represented. We also liaised with the PHA, and commissioned local expert analysis, to assist us in formulating robust, expert analysis and advice to the Minister.

92. I also worked closely with the three other UK CMOs to agree joint advice to the UK Government and to the NI Health Minister. With my DCMOs, I met regularly with CMO/ DCMO counterparts across the Devolved Administrations and the Republic of Ireland (RoI) to exchange intelligence and agree public health advice and communications strategies for communicating with the public.

93. I would add that these fora were well established prior to the pandemic, and a part of our "business as usual" arrangements. Their importance became very evident during the 2009 H1N1 pandemic, where we quickly gained an appreciation of their importance in terms of maintaining robust connections between UK and RoI partners, which would be "switched on" and the pace of meetings turned up very quickly when the need arose, such as during the Covid-19 pandemic.

Leadership / succession planning

94. On the subject of succession planning, part of the normal leadership support within my Group lies in the fact that I have two DCMOs supporting me, and they in turn are supported by a number of SMO/MOs with specific expertise and policy advisory responsibilities. The CNO role in the Department has two deputy CNOs; and the CPO role has three deputies.

95. As Group Head responsible for the Department's emergency planning, resilience and response function, I recognise the significant and unrelenting demands on all staff, including the professional and technical roles during an emergency response due to the small numbers of staff, who are not interchangeable. Any emergency response is characterised by long hours and seven day working – for months at a time. This significantly impacts on people's family lives, their work-life balance and their physical and mental wellbeing. I am therefore indebted to these colleagues who continued in these unrelenting roles, despite all of this. Nevertheless some of the impacts result in staff burn-out, and this is often characterised by staff moves between waves or at the end of the response.

96. 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/multiple UK fora – we do not have the staffing complement to field separate individuals for each forum. As only these key individuals hold the requisite knowledge, skills and expertise, and operate in key roles, the Minister and I rely on their judgement and professional opinion. I recognise that there are no easy answers to this issue, given the constraints around staffing and Departmental budgets, however this is a risk that the Department recognises and seeks to manage and mitigate.

97. There is no formal succession planning per se for chief professional roles. In any emergency, the Department endeavours to supplement expertise and may seek assistance from retired colleagues (as was the case by appointing retired DCMOs for a short period during the Covid-19 response) as these individuals have the necessary knowledge and expertise in key roles to support the response, and they have the appropriate situational awareness, experience of government and the operation of the Department's command and control structures described in our ERP to enable them to get

up to speed very quickly. Also, I contacted and sought assistance from HSC organisations not involved in the response, in order to request staff on loan to support me, as was the case when the then Medical Director of RQIA was loaned to me. The value in that was that this individual, had previously worked in the Department as an SMO and as a Consultant in Public Health in the PHA and had the necessary expertise and situational awareness.

98. It should be noted that there is simply not the agility or responsiveness within the Department to adequately resource or respond to multiple competing/urgent demands. Consequently, the demands on small groups of staff, both in the Department and across the HSC sector can, at times, be almost unsustainable. It has to be acknowledged that this is an area of a vulnerability/risk to the Department.

99. With regard to the CSA post, this post is part-time and does not normally have a formal deputy. In relation to its research and development role, the Assistant Director of the R&D Division in PHA can deputise for the CSA, when required. However, there is no formal separate arrangement for succession planning to cover other aspects of the role in the event of the CSA becoming incapacitated during an emergency. In practice, the Department could ask existing staff (DCMOs for example), PHA staff with relevant scientific expertise, or local academics to cover aspects of the CSA role. In light of the considerable demands placed on the CSA during Covid-19, a Deputy CSA (as noted previously in paragraph 68) was appointed for part of the response.

Developing the data agenda in an emergency

100. In the initial stages of any emergency response, as the situation is evolving, it has to be recognised that there is likely to be very little data or evidence available on which to base decisions. Consequently, decisions are made on the best available evidence at that time, with appropriate caveats and limitations clearly articulated. There is always a delicate balance to be struck in managing risks and balancing excessive caution in these circumstances.

101. At the outset of any outbreak, such as the Covid-19 pandemic, the Department will work closely with local HSC partners, particularly the PHA, and UK/four nations partners to agree definitions to ensure consistency of approach. This will enable the accurate collation of UK data, enable us to report accurately and provide country by country comparisons across key indicators such as case fatality rates, hospitalisation rates, deaths, etc.

102. During the response to the 2009 H1N1 pandemic, specific examples of developing the data agenda included the work undertaken by CMO Group, supported by the Department's Information and Analysis Directorate (IAD), to develop: an information hub in partnership with the PHA, the then HSCB and IAD; better links with the Patient Administration System (PAS); the FLuCon report as the mechanism to report service pressures in primary and secondary care across the UK; and a Common Recognized Information Picture (CRIP) which provided an accurate reflection of the NI position on a daily basis for the Minister.

103. As indicated above (in paragraph 101), one of the first things the Department does is work with the PHA to ensure that a novel disease or outbreak is classified in legislation as a "notifiable disease" to ensure that we can begin to capture data as early as possible through the PHA monitoring systems. If it is not already classified as a notifiable disease then this requires a change to legislation, as was the case with regard to Covid-19.

104. As the emergency evolves my role as CMO is to ensure that the Minister, and I, as the professional medical lead for the health response, disseminate data clearly in order to inform decision-making within the Department, and indeed the wider decision making by NI Executive Ministers. For example, during the response phase (which is outside the date range) I commissioned a Covid-19 Public Information Dashboard from Departmental statisticians to provide a common data source covering a wide range of data that was made publicly available to decision makers, HSC staff, the media and the public. This Dashboard was key to data transparency and engaging with the public on planned public health interventions, by providing the data to support decision-making and sharing evidence of the impacts of those interventions.

The differences between data and modelling

105. Modelling is an important tool to support understanding of the situation at a given point in time and to inform understanding and awareness of the potential impacts of different policy choices and options. However a model is only as good as the data underpinning it, and as noted earlier, it is important to take time to get data collection processes and agreed definitions in place. A learning point from the 2009 H1NI pandemic was the importance of local NI modelling capability. At the onset of the pandemic I therefore asked the CSA to develop a NI Modelling Group which was maintained throughout the pandemic response. This capability has now been developed within the PHA.

106. Modelling uses data and evidence-based assumptions to illustrate what might happen in the future in a range of possible scenarios; however, models cannot predict the future. Infectious disease modelling is also not a tool that can balance direct disease burden with other harms, such as the economic and social impacts of policy decisions or interventions. It complements but cannot and should not replace other disciplines or the interrogation of data.

107. The four UK CMO's Technical Report [see Exhibit MMcB5009] discusses the nature and limitations of modelling in detail.

Data Sharing

108. Advice can be presented to the Minister/NI Executive Ministers in a variety of formats, such as submissions, briefing papers, face-to-face meetings (including PowerPoint presentations) and published reports. A key part of the advice to Minister is the provision of the up-to-date evidence base, which includes statistical information and data.

109. In relation to the sharing of data, one of the challenges identified during the 2009 H1N1 pandemic was collation of information which was not routinely collected or collected in real time. The pressure placed upon colleagues in PHA was intense. Significant demands were also placed upon the Departmental statistical staff to provide rapid, up-to-date information on a regular basis. As the pandemic reached its peak, the demand on senior staff in many of the organisations to respond to requests for media interviews and to counteract misinformation became unsustainable. I decided to introduce and lead weekly media briefing sessions, accompanied by a panel of experts from across HSC organisations, which provided a forum for updating and informing the public and the media, and to share the facts of the situation and avoid the spread of misinformation. This arrangement proved to be extremely useful and set a rhythm for proactive interaction with the media and reduced the number of ad hoc queries arising during the H1N1 pandemic.

110. Reflecting on this experience during the Covid-19 response as mentioned earlier, the Public Information Data Dashboard was introduced in order to minimise multiple requests to the Department for the same information/ briefings and to avoid duplication, and to share information publicly, in an open and transparent manner.

111. On occasions at the request of, or with the agreement of, the Health Minister, with the CSA, I provided one to one briefing to the First Minister, deputy First Minister and other departmental Ministers. These were information sharing meetings which allowed Ministers

the opportunity to ask more detailed questions, again often in advance of Executive meetings, or in relation to the specific policy remit of a particular Department. My role in these briefings was to share with other Ministers the information and advice that I shared with the Health Minister.

Role of key officials in statistical analysis and data science

112. In Northern Ireland, the Chief Statistician, Siobhan Carey, is the Registrar General for Northern Ireland and the Chief Executive of the Northern Ireland Statistics and Research Agency (NISRA). NISRA is an Executive Agency of the Department of Finance (DoF) and incorporates the General Register Office (GRO) for Northern Ireland. NISRA's core purpose is to support decision makers in the formulation of evidence-based policy and inform public debate, through the production and dissemination of high quality, trusted and meaningful analysis; facilitate research and deliver the decennial population census and civil registration services. NISRA addresses the needs of a wide range of departmental users, producing reliable high quality statistics and research and disseminating this information to its users efficiently and effectively. NISRA staff ensure that statistical outputs are fit for purpose so that users can have a high degree of confidence in them.

113. Through a Concordat between the departments, NISRA staff are embedded in the Department to provide dedicated statistical advice, support and analytics directly to departmental staff – all are located in the Information and Analysis Directorate (IAD), headed by a Grade 6 Statistician. Work carried out by IAD staff is carried out in line with the Code of Practice (CoP) for Statistics, which ensures that statistics published by the Department inspire public confidence and demonstrate trustworthiness. It also provides IAD staff as the producer of official statistics with the detailed practices they must commit to when producing and releasing official statistics. All statistics published by the Department are designated as Official Statistics.

114. IAD's role in an emergency is not specifically defined however the established networks in place as well as the COP ensure that the IAD staff are well prepared to be able to respond to developing data demands. This includes supporting the emergency response of the department, by providing core statistics, data and analytics to in a timely fashion, to inform the emergency response, decision making and to feed into modelling undertaken by the Department. These established relationship and statistical capabilities of IAD were a key resource during the pandemic response although the demands were significant on a very small team.

115. Advice provided by CSA and myself on health issues to the NI Executive through the Health Minister was based on data, modelling, scientific analysis and outputs of various scientific advisory groups (including SAGE and its subgroups etc.), as discussed elsewhere. This included behavioural and social science advice. Advice from other analytical disciplines (economic advice, educational advice, etc.) was provided to the NI Executive via the appropriate Departmental Minister. Insights into the analytical basis underpinning this advice would need to be obtained from the relevant NI Department or TEO as I would not be able to comment on this. My role and that of the Department's CSA was only in relation to health advice.

116. It may be possible to develop a subgroup, which focuses on data from multiple analytical disciplines (for example, economics, science, medical, etc.) during an emergency to aid Ministers in considering, and balancing what might be conflicting advice and data from different sources/Departments. Alternatively, it may be useful to have a cross-departmental expert group consisting of the different analytical disciplines, which could be tasked with reconciling the various sources of advice and coming up with consolidated advice or a consensus position to aid Ministers' decision-making. This could be chaired by the TEO CSA, if one is appointed, and have representation from other CSAs or technical advisors. This would be a matter for TEO to consider further. It should be noted however that it is likely that the perspectives arising from Health advisors and Economic advisors would be quite different, as was the case at times during Covid-19.

117. At the UK level a broader range of subgroups focused on other disciplines might also feed into SAGE, with consolidated SAGE advice to Ministers reflecting the broader range of perspectives. A similar NI specific approach could also be considered.

Collating data on infection and fatality rates

118. The PHA is responsible for surveillance systems for infectious diseases and has its own processes in place to monitor infection rates. During a pandemic response, the Department's statisticians take the lead in publishing Official Statistics, including those on deaths and infection rates, and did so from 19 April 2020 onwards, working closely with colleagues in PHA and other NISRA branches as necessary.

119. We are limited in our ability to disaggregate data by all 9 of the equality categories specified in section 75 of the Northern Ireland Act 1998 and tend to collect and report data by age, gender, and occasionally by geographical location. It was not possible to disaggregate data for other inequalities or specific vulnerabilities.

120. The ERP articulates the process for the management of the flow of all information into and out of the Strategic Cell during an emergency response. In the first instance, a Situation Report (Sit-Rep) would be completed by the Emergency Operations Centre (EOC), regarding the health impacts of the emergency. This information would subsequently be passed to the lead coordinator of NICCMA if established. Within the Health Gold Command context, the Sit-Rep is used to brief senior management, other Health Departments and Agencies and potentially the Cabinet Office Briefing Room (COBR). NICCMA may also use the information provided to brief the NI Executive, the Head of the Northern Ireland Civil Service, the Crisis Management Group, the Civil Contingencies Group (NI) and the Northern Ireland Office (NIO). In the event of a UK wide response, it will also be used to develop a Cabinet Office Commonly Recognised Information Picture (CRIP). In addition, there are established arrangements for data collection and data flows for management of public health investigation and response to outbreaks of infectious diseases both locally and nationally. Although outside the time frame recent examples include the national incident management teams established to manage Non A to E Hepatitis, Scarlet Fever and Invasive Group A Streptococcal Infection. Such responses require effective coordination across UK Health Departments and respective public health bodies, including UKHSA.

Adequacy of Structures for Data Analysis, Scientific and Medical Advice

121. In response to the Covid-19 pandemic it was necessary to stand up a range of scientific advisory structures and a modelling group, however data flows to inform modelling were initially limited, and refinement of data collection and automation of flows via PHA and IAD was required and took some time to establish.

122. While there were individuals with relevant expertise in NI, there was no formal modelling capacity immediately available. It was necessary to bring together that expertise and establish a modelling group under the CSA at an early stage. As a result of this learning point arising during the response to Covid-19, this deficit has now been addressed, and permanent modelling capacity has been established and is based within the PHA.

123. Similarly, the Strategic Intelligence Group referred to earlier (in paragraph 86) was established to allow consideration of relevant scientific information specifically from a NI perspective. While this ad hoc group has now been stood down, it could be rapidly re-established if required.

124. Inevitably, any pandemic will have its own specific characteristics and requirements so flexibility around data requirements and supporting structures is essential, with the agility and ability to set these up rapidly as needed, calling on all parts of the system to assist as required and share their knowledge and expertise.

Public transparency and communicating with the public

125. As the CMO, I am the public face of any health led emergency response and my role is to lead communications to provide advice, information and reassurance to the HSC and to the public throughout an emergency response. Any communications are developed in conjunction with the other UK CMOs and in line with the UK Pandemic Flu Communications Strategy to ensure consistency and clarity in messaging, and to prevent the spread of misinformation.

126. Information produced by UK expert groups, including SAGE and its membership, is publicly accessible on the GOV.UK website.

127. Health scientific, medical and technical advice is provided by the Minister to the NI Executive to aid decision-making in the event of an emergency, or where there are health consequences of any emergency. The Department does not generally publish the advice it provides to Executive Ministers as communication of executive decisions and their rationale is a matter for TEO.

128. Work to refresh the UK Communications Strategy was a major strand of preparations under the Pandemic Flu Readiness Board (PFRB) programme. In collaboration with the 4 Nations Health Departments and key partners across HSC organisations and the NI Executive, the Department led the development of a Northern Ireland Action Plan for inclusion into a more comprehensive UK-wide pandemic influenza health-focused communications strategy. While work to finalise the overall UK wide plan paused in preparation for EU Exit, a NI Annex intended for use by all relevant NI Executive Department's communications teams, the Department of Health and the relevant communications teams in ALBs within NI, was submitted to the Department of Health and Social Care (UK) for inclusion to the final communications strategy in April 2018.

129. Obviously relevant data cannot be published in advance of a specific emergency commencing. However, once the pandemic started, building on the learning from the 2009 H1N1 pandemic in relation to media reporting and a desire for up-to-date data, I sought to develop a Covid-19 Public Information Dashboard which could be shared widely with interested parties, journalists and the public.

130. The Dashboard included NI wide summary information about the volume of testing and the number of deaths reported by HSC Trusts that were associated with Covid-19. Although the Dashboard was based on similar information published by other UK jurisdictions, the NI Dashboard included additional data about ICU bed occupancy and availability.

Information Sharing with the Republic of Ireland

131. The Government in the Republic of Ireland had its own separate advisory structures and committees and, in addition, looked primarily 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 close cooperation, sharing of information and regular engagement.

132. At a policy level, since 2012, officials from RoI and NI attended the Obesity Prevention Strategy Steering Group together to share information and learning across the two jurisdictions on obesity, physical activity and diet/nutrition. This Group met twice a year. Both countries were also members of the All-Ireland Food Poverty Network.

133. In 2012, the CMOs in NI and RoI jointly asked the Institute of Public Health in Ireland (IPHI) to establish a North South Alcohol Policy Advisory group – to share information, best practice and lead collaboration in relation to alcohol policy. This group continues to meet and provides annual updates to both CMOs. There is also a British Irish Council (BIC) workstream on drugs and alcohol, chaired by RoI, which seeks to join up approaches and share learning across Ireland, Scotland, Wales, Northern Ireland, Jersey, Guernsey, and the Isle of Man. BIC alcohol and drug workstreams meet approximately three times a year at official level, and meet about once every two years at Ministerial level.

134. Suicide prevention is another policy area on which there is joint collaboration. This is a regular agendum at North South Ministerial Council meetings and best practice information is regularly shared at official level in both jurisdictions, including through ad hoc policy meetings between officials. The Self-Harm Registry has operated on an all-island basis since 2012 and allows for robust collection of self-harm presentations at Emergency Departments and for standardised reporting. Close working continues with the National Suicide Research Foundation in Cork in relation to data analysis and technical support. Peer review papers which explored emerging issues on both sides of the border and the impact on self-harm service delivery have also been published.

135. During the pandemic, the two Health Departments had weekly meetings jointly chaired by the CMOs of NI and the RoI. The meetings were attended by the Department's CSA and DCMOs from both jurisdictions, and respective subject-specific policy lead officials from both administrations. Data was shared in relation to the pandemic trajectory and information concerning the policies covering international travel in relation to border health measures.

136. It should be noted that regular engagement takes place at a tactical and operational level between leads in NI and RoI via fora such as the Cross Border Emergency Management Group (CBEMG), which was established in 2014, to increase co-operation between the statutory agencies involved in emergency management within the border counties of NI and RoI. An MoU is in place between the NI Ambulance Service (NIAS) and the RoI National Ambulance Service (NAS) in relation to mutual aid.

Part 3: inter-organisational cooperation

Cross-NI Executive

137. As noted earlier, within NI, TEO is responsible for civil contingencies preparedness in NI, and the Department is responsible for managing the health consequences of any emergency. The key strategic emergency preparedness body for the public sector in Northern Ireland is the Civil Contingencies Group (Northern Ireland) (CCG(NI)). The Head of the Northern Ireland Civil Service chair this group and the Secretariat is provided by TEO. The Department is represented at this meeting by the Grade 5 Director of Population Health or DCMO Public Health, (where necessary/supported by the Grade 7 Head of Emergency Planning responsible for civil contingencies preparedness). This group does not include the CMO or CSA as medical/scientific experts.

138. CCG(NI)'s role is to provide strategic leadership in relation to civil contingencies preparedness; to exercise a corporate governance function for civil contingencies preparedness; to oversee delivery of a cross-cutting Work Programme to enhance resilience across the public sector; to share key information on civil contingencies risks and preparedness; to participate in the effective delivery of the NI Central Crisis Management Arrangements (known as NICCMA) during an emergency; and to report to Ministers.

Expert advisory groups and advisors

139. There was no formal arrangement to interact with the National Academies (the Academy of Medical Sciences, the British Academy, the Royal Academy of Engineering and the Royal Society) pre-Covid-19. The CSA would receive occasional correspondence about or from them, but not in a formal capacity.

140. Regarding Research Councils and UK Research and Innovation (UKRI), the CSA met regularly with representatives of relevant UKRI bodies (in particular NIHR, MRC, ESRC and Innovate) in relation to Research and Development issues, and occasionally with the Head of UKRI. However, these meetings did not have any particular focus on pandemic planning and preparedness in the relevant period. During Covid-19, much of the discussion and co-operation, which took place, related to the epidemic and its consequences.

141. Before January 2020 the CSA had limited engagement with Government Office for Science (GO Science), and this interaction was related to health research and the economy, rather than the issues under consideration here. Interaction increased substantially during the pandemic with regular meetings in relation to science co-ordination and information sharing.

142. The CSA did have occasional interaction with the UK Government Chief Scientific Adviser (GCSA). As TEO did not have a dedicated CSA, most communication with NI took place either through the Department's CSA or the DAERA CSA. The Department's CSA received some papers and information via these routes. Only one CSA per Devolved Administration was allowed to attend network meetings.

143. There were however good relationships between the Health CSAs for Wales and Scotland, with regular DA meetings. There were occasional interactions with the DHSC CSA, although post-Covid-19 regular meetings now involve all four nations Health CSAs. Inevitably, during the pandemic almost all discussion was about aspects of Covid-19.

144. In the absence of any Government CSA for NI, there was no significant interaction with overall CSAs for Scotland and Wales. The CSA did have occasional interactions with the RoI's CSA, mainly around research issues, during the relevant period. Interactions with the RoI Science Advisors during the pandemic are covered elsewhere (paragraphs 92) but these did not take place at the level of the RoI Government CSA.

WHO and expert advisory structures

145. The formulation and communication of scientific, medical and technical research evidence and advice at a global level, for example that provided by the WHO, has largely been received indirectly by me and the Department through the dissemination of relevant reports, expert advice and alerts. This covers the work of the WHO globally in promoting healthier lives and in the global response to health emergencies.

146. In general, interactions with WHO or bodies in other countries occur through UK Government structures, and any resulting advice would flow from there to NI if relevant. Apart from that, information/advice made public by WHO would be available to the CSA and others in NI through online sources, although there was no formal mechanism to consider separately such information during the relevant period.

147. Inevitably, WHO takes a global perspective on matters, whereas the role of scientific advisors in the UK is to take a UK perspective, while being aware of and considering the international situation. In addition, it is legitimately possible for scientific advisors to take different views of available evidence, particularly in a fast moving situation. It is clearly therefore possible that UK Science Advisors might take a different view to WHO on some issues and provided this is firmly grounded in evidence, it could be reasonable to do so. However, the CSA is not aware of this situation arising in relation to any of the issues under consideration during the relevant period, though there were times when it did occur during the Covid-19 pandemic (for example, in relation to WHO advice around border restrictions).

148. An example of more direct input and support at a NI level was the contribution of WHO to the development of policy and the current public health framework for NI – *Making Life Better* – developed by Population Health Directorate [see Exhibit INQ000183430]. Departmental policy officials engaged directly with the then Director of the Division of Policy and Governance for Health and Well-being at the WHO, who acted as a critical friend for the development of the strategy. Comments from the WHO were taken on board and this strengthened the content and direction of the framework. Liaison with the WHO continued throughout the implementation of the strategy. This work was also influenced by the UN Millennium Goals (8 international development goals for 2015 that had been established following the Millennium Summit of the United Nations in 2000), following the adoption of the United Nations Millennium Declaration.

149. In respect of health protection, the work of the WHO helped inform emergency planning and preparedness and approaches to recent epidemics and emergent diseases such as the 2009 H1N1 pandemic, SARS, MERS, Ebola and Zika outbreaks.

Expert advisory structures outside the UK

150. Direct contact by the Department with expert advisory structures in other countries outside of the UK does not usually occur as such representation would normally be undertaken at a UK Government level, and information shared with the devolved administrations as appropriate. The Department's CSA would have access to relevant scientific, medical, research and other technical evidence, advice and reports when published or during the pandemic through a variety of UK Government sources.

151. In relation to High Consequence Infectious Diseases (HCIDs), epidemics and pandemics, neither the CSA nor I would be in a position to provide definitive detail on how scientific, medical and technical research evidence and advice is formulated to the UK Government. The UK Government has its own advisory structures for scientific, medical, research and other technical advice, in addition to contacts with other European advisory structures and the WHO.

152. Some of the expert advisory groups, such as the Joint Committee on Vaccination and Immunisation (JCVI) and the National Screening Committee (NSC), are standing committees, which provide advice to all UK countries on an ongoing basis. For others, such as NERVTAG and SAGE, the Department would have access through participating in meetings and would receive consensus statements and recommendations at times when emergency response arrangements are operational.

153. The CMO and CSA provide advice to the Department and the Health Minister, and through them, to the NI Executive for their wider consideration, in conjunction with advice from other sources.

Part 4: Planning for a pandemic

154. As noted previously at paragraph 17, responsibility within the Department for both pandemic and civil emergencies planning and preparedness is delegated to the DCMO Public Health, Director of Population Health and Head of Emergency Planning Branch. Along with other expert entities and chief professional officers in the Department, I am consulted about the content of planning documents and guidance, and included in desktop exercises/ simulation exercises/training events relevant to my role and seniority in the Department. In general the CSA was not included in such exercises as it was not part of his role. Departmental planning is covered in more detail in the Module 1 Corporate Statement and I will not duplicate that detail here.

155. In NI we rely on advice, forecasts and risk assessments on the UK position that are provided by UK Government, normally through DHSC. We are also sighted on the UK Risk Register and as mentioned previously, NI has its own local risk assessment that takes account of risks outlined in the UK Risk Register. Ownership of the NI Risk Assessment sits with TEO Civil Contingencies Policy Branch. In both risk assessments, a pandemic is identified as the number one risk facing the UK/NI.

156. In addition to being connected in to the UK monitoring systems, in NI we monitor the emergence of HCIDs through the well-established surveillance systems operated by the PHA on an ongoing basis; the PHA is also well connected with its counterpart in the UK (Public Health England as it was in the period leading up to the Covid-19 pandemic). Then those monitoring systems show evidence of an emerging infectious disease, the PHA would advise the Department, and we would begin to monitor the situation, considering the level of response and command and control arrangements required. The Department would liaise with DHSC as required to ascertain the UK position. It is impossible to know at the outset of any occurrence of an infectious disease or HCID the likely severity or scale of impact, hence the need for careful monitoring and sharing of information as soon as is practicable with HEALTH SILVER partners, with TEO regarding wider NI planning and response requirements, and with UK counterparts.

Readiness to deal with a new and emerging infectious diseases

157. The UK Pandemic Influenza Strategy was revised and published in 2011, following the completion of lessons learned in relation to the 2009 H1N1 pandemic. Following on from that the Department revised and published the *NI Health and Social Care Influenza Pandemic Preparedness and Response Guidance* [see Exhibit INQ000183431] to assist HSC organisations to revise their pandemic preparedness plans in 2013. Revised plans at

UK and NI level were rehearsed through Exercise Cygnus in 2016, focusing on a more severe pandemic than had been experienced during the 2009 H1N1 response. Lessons learned were identified at local and UK level following the exercise and we again amended our ERP at local level. The refreshed Emergency Response Plan was published in January 2019.

158. In addition, the Department's ERP was flexible and scalable, and dovetailed with the HEALTH SILVER Joint Response Emergency Plan. Plans and systems were in place; however, I would note that once an infectious disease, high consequence infectious disease or pandemic is declared, there is always a degree of bedding into roles and responsibilities associated with the level of the response needed, as each event is different in scope, scale and pace. Nothing can truly prepare people for this in advance and this point is frequently reflected in lessons learned after any response, due to the loss of corporate memory or the loss of staff involved in previous responses and because we may be dealing with the unknown in the form of a novel virus.

159. The additional training we undertook on emergency planning and response within the Department in the event of a "no deal" EU Exit, along with the associated development and maintenance of a list of Emergency Operations Centre volunteers was extremely useful in ensuring an extended group of individuals were available to mount an emergency response. These arrangements were also exercised, in conjunction with UK colleagues as part of the Operation Yellowhammer preparations. Along with the willingness of colleagues, right across the Department to contribute to the collective response this was a major strength, particularly in the initial stages of the pandemic response.

160. The duration of the response did place significant pressures on many individuals and there was neither the agility nor the strength in depth to allow key individuals to rotate out and have adequate time to rest and recover, and this was particularly evident at the top levels of the Department and among the professional roles, including my own. This was compounded by the initial challenges of working from home and a need to ensure that the necessary IT support was provided. That said, the necessary IT support was provided very promptly and teams very rapidly adapted to remote working.

161. The ERP itself did not fully address the situation of a prolonged pandemic response and the necessary review and transition arrangements from the immediate emergency response into a more sustainable business as usual model. Therefore, for example, as the pandemic response evolved, we needed to modify and expand the Strategic Cell

arrangements to cover more Covid-19 specific areas of work and develop more sustainable arrangements. This included the establishment of several Covid-19 Oversight Boards to manage the public health response, for example, the NI SMART (Systematic, Meaningful, Asymptomatic, Repeated Testing) Programme Board; the Test, Trace, Isolate, Protect Strategic Oversight Board; the Covid-19 Vaccination Programme Oversight Board; the Covid-19 Therapeutics Oversight Board; and the Rebuild Management Board.

162. At the outset while we had access to several UK modelling groups through SPI-M, the absence of NI specific modelling capability was a deficit which had to be rapidly addressed and indeed the PHA has subsequently developed this capability. A major strength was the established networks between the health service, academia, other government departments and their ALBs, and industry. This was particularly important for instance in the development of Covid-19 testing capacity given the particular challenges in this area at the outset of the pandemic. Partnership working through the NI Pathology Network, the Regional Virus Laboratory, the Agri-Food and Biosciences Institute (AFBI), the Almac Group and QUB – through a Scientific Consortium – allowed NI to maximise existing testing capabilities using a variety of testing platforms and to standardise testing arrangements.

163. Given the opportunity costs and other competing priorities it will not be possible to maintain readiness at this high level across the Department, government or the wider HSC system. For the future, it is about ensuring that both generic and specific technical expertise, skills and capabilities are maintained across the Department within a core group of individuals, which can then be rapidly flexed and expanded in response to any new emergent threat, with the addition of staff across government who have generic transferable skills as required. It is important that these capabilities are viewed across other government departments as an essential element of risk management and effective governance in delivering key policy objectives and as such, this needs to be considered more widely in all relevant policies.

164. Recognition of the need for system wide government capabilities to ensure such leverage and flexibility is important. As was evident during the height of the pandemic, the health consequences and impacts, while hugely significant, were only one aspect. It is important therefore that there is a whole of government approach to impact and synergies of threats. As such, it is less about a specific plan and more about capabilities and how these are developed, integrated and maintained across government.

165. Technology is an important element of the business capability in any response. This was evident in the pandemic – for instance in the development of the various data sources and flows, including a number of which were public facing such as the Covid-19 dashboard and the Vaccine Management System (VMS). The Nosocomial Dashboard was effective in supporting health service trusts in the management of healthcare associated outbreaks of Covid-19 within health care facilities. Consideration needs to be given to what we can build on from the Covid-19 pandemic response to provide broader and more enduring capabilities in surveillance, monitoring and interactive systems across public health.

Public health services, resources and testing capacity

166. The UK Pandemic Influenza Preparedness Programme (PIPP) was established in 2007 and is a DHSC-led programme for managing pandemic preparedness, involving pandemic preparedness leads from Scotland, Wales and Northern Ireland. Clinical countermeasures were, and still are, a key part of the strategic approach to managing a pandemic. Each UK country is responsible for maintaining its own stockpiles and distribution arrangements for antivirals, antibiotics and vaccines.

167. The Clinical Countermeasures Management Board (CCMB) chaired by UKHSA (previously PHE) sat beneath the PIPP Board and was attended by each of the Devolved Administrations. This Board oversaw procurement of clinical countermeasures such as antibiotics, antivirals, PPE and related consumables required to respond to a pandemic. CCMB's procurement strategy was informed by expert scientific advice provided by groups such as NERVTAG, ACDP and JCVI.

168. Responsibility for attending these UK meetings and contributing to decisions on behalf of NI sat with the Director of Population Health and the Head of Emergency Planning. The Head of Emergency Planning managed the revenue and capital budgets to support Pandemic and Civil Contingencies preparedness, including NI's contribution to UK wide procurement exercises for NI's share of stocks, and storage costs where appropriate. The outturn on emergency preparedness has fluctuated annually to reflect the expiry profile of the PIPP stockpile and cost of replenishment to agreed targets, as well as one-off costs.

169. The Department is responsible for storage and distribution of the PIPP stockpiles and cycles some products to reduce wastage. Part of the stockpile is held on a Just In Case (JIC) basis, with PHE/UKHSA maintaining arrangements for further provision of stock via procurement on a Just In time (JIT) basis.

170. It should be noted that normal procurement of stocks and supply chain management on behalf of the HSC Trusts in NI is the responsibility of the Business Services Organisation's Procurement and Logistics Service (BSO PaLS), with whom Departmental leads worked very closely during the pandemic response.

171. Whilst I was not directly responsible for, or involved on a day-to-day basis in stockpiling decisions or supply chain management, I was consulted by the Director of PHD/Head of Emergency Planning and approved decisions on these issues provided to me via departmental submissions.

172. Responsibility for the procurement of vaccines and therapeutics sat at UK level, as DHSC held the contracts for these procurements on behalf of the UK.

Testing

173. Prior to the Covid-19 pandemic each of the five HSC Trusts in NI had its own hospital laboratory (including microbiology and serology capacity). There is also a Regional Virology Laboratory and regional services for genetic testing (including pathogen testing for public health purposes) which is based in Belfast HSC Trust. In addition to our own HSC capacity, NI has well established relationships with the Public Health Laboratory network in the UK for specialised testing which is not available locally.

174. There is scale up capacity in local laboratories in the event of a need for mass laboratory testing. There is additional capacity in Queen's University Belfast and the Veterinary Service Laboratory, both of which were utilised during Covid-19. In addition, there is significant private sector capacity (principally in Randox, a private company and world leader in the in-vitro diagnostics industry) which could be utilised to increased testing capacity in the event of public laboratory capacity being insufficient.

175. These laboratory capabilities were used flexibly to maximise testing capacity at the outset of the pandemic although testing capacity was initially significantly constrained and this meant that difficult choices were necessary about how testing should be used particularly in the first wave. During the pandemic, while tests for Covid-19 were developed rapidly, the time taken to scale up testing capacity was significant as a result of global supply chain challenges in relation to the availability of reagents and other consumables. This meant that there was a limit on the information that was available to guide the public health response in the early phases of the pandemic. Additionally the measures which could be taken in relation to the testing strategy were also limited. As with all tests, clarity

on the best use of tests and accurate rapid reporting systems were as important as the tests themselves, and this also evolved and took time. The development of mass population symptomatic and asymptomatic testing, along with the development of self-testing with lateral flow devices (LFDs) to enable people to manage the risks associated with day-to-day activities, was unprecedented. While this was eventually a huge achievement, there was a period particularly in the Spring of 2020, when community cases exceeded the supply of tests and existing systems were not capable of scaling at the pace needed to meet demand. In these circumstances, testing capacity needed to be prioritised and focused on: those needing clinical care; vulnerable settings such as hospitals; outbreaks in care homes; and key workers. These challenges and the approach adopted are reflected in the UK CMO Technical report on the Covid-19 pandemic (Chapter 6, pages 185-211) [see Exhibit MMcB5009].

176. In April 2020, the then Health Minister presented the NI Testing Strategy for Covid-19 to NI Executive Ministers [see Exhibit INQ000183432]. This Testing Strategy aimed to reduce harm to individuals from COVID-19 and to support measures needed to protect the general population. An Expert Advisory Group on Testing (EAGT) was also established by the Minister (chaired by a senior public health consultant from the PHA), to lead on providing advice and making recommendation on the Covid-19 testing strategy. The key role of the group reporting to the Department was to develop the Northern Ireland approach to Covid-19 testing and to oversee/coordinate implementation of testing.

177. Early in the Covid-19 response, at my request, the Department established an academic consortium (called the Scientific Advisory Consortium) – this involved Queen's University Belfast, University of Ulster, Western HSC Trust's Clinical Translational Research and Innovation Centre, the Agri-Food and Biosciences Institute (AFBI) laboratory and the Almac Group. This consortium examined the feasibility of making reagents locally, worked on validation of antibody testing kits and on driving scientific innovation in Covid-19 testing to scale up diagnostic testing and to increase our testing capacity.

178. Testing was a critical part of NI (and the UK's) pandemic response. We increased our testing capacity significantly through the formation of new partnerships to deliver on this, both locally (through the aforementioned Scientific Advisory Consortium), and nationally (under the UK National Testing Programme).

179. The ability to increase testing capacity was critical and increasing our testing capacity enabled us to commence a number of important surveillance programmes in general practice, emergency departments and care home settings. These programmes helped us

to understand the activity of the virus and to monitor trends in Covid-19 infections. They also helped us design and implement appropriate control measures where they were needed, both in hospital and community settings.

Pathology Network Reform

180. Prior to the Covid-19 pandemic there was already a programme of work ongoing to modernise/transform pathology services in the face of various challenges (which were common across the UK and globally). The modernisation of HSC Pathology Services was recognised as a Departmental transformation priority by the Minister in 2016. During the period in which the NI Assembly was suspended (2017-2020), the Department endorsed a programme of work aimed at addressing these service challenges and enabling wider transformation of pathology services.

181. A portfolio of pathology transformation programmes was established in 2018 and includes:
    - the NI Pathology Information Management Systems Programme (NIPIMS);
    - the Pathology Blueprint Programme, which is exploring options for regionalising pathology management services and creating the blueprint for a new regional pathology service management structure; and
    - a range of ongoing complementary regional projects to address existing service/capacity challenges and deliver service transformation, including pathology workforce planning, training, and regional standardisation of laboratory processes.

Contact tracing capacity

182. Contact tracing is an integral part of the response to the outbreak of an infectious disease and is managed operationally by the PHA. We had never before undertaken community testing and contact tracing at this scale during a pandemic or indeed for this duration. While contact tracing was used during the H1N1 influenza pandemic in 2009 to inform the use of post exposure prophylaxis, this was only for a period of three months. Early in the pandemic, during the first wave, we did not have the testing or contact tracing capacity to ensure that all individuals could access a test and that contact tracing would be completed in a timely manner so at to be effective in breaking chains of infection. Without timely access to tests, due to limitations on testing capacity, infected people might not be rapidly identified and contract tracing started. The high transmissibility of the virus also meant that there was a significant number of contacts that had to be reached for each case within a short timeframe if contact tracing was to identify sufficient contacts in time to stop the infection spreading further. In May 2020 SAGE estimated that at least 80% of the contacts

for each case identified needed to be traced for the system to be effective. There has been significant and important learning during this pandemic on the effective deployment of contact tracing over an extended period of time including the combined use of telephone and digital approaches and the use of apps for automated and anonymised contact tracing. The challenges and the approaches adopted are reflected in the UK CMO Technical report on the Covid-19 pandemic in the UK (Chapter 7, pages 212-232).

183. As part of preparedness planning, the PHA regularly reviews its business continuity plans to support plans for a Standard and Enhanced incident response, both of which require the redeployment of pre-identified staff to support contact tracing. Activation of a Standard Response (20-150 cases per day) requires the identification of a sub-group of contact tracers from a contact-tracing bank, which is maintained for activation in support of a Standard or Enhanced incident response. Activation of an Enhanced Response (up to 500 cases per day) requires the redeployment of additional contact tracing bank and PHA staff to support contact tracing and additional support arrangements, including clinical and administrative support. Without a doubt contact tracing is resource intensive, and requires a lot of time and effort by the PHA to maintain its bank of contact tracing staff who can be deployed to undertake this activity as and when required.

184. In the context of a continued increase in new cases and in order to identify and articulate the key issues impacting on the current level of service and to provide assurances on the capacity of the existing contact tracing system, I commissioned a Rapid Review of the contact tracing service (CTS) and its delivery model which reported on 12th October 2020 [see Exhibit INQ000183433]. The review was informed by a key assumption that there would be a significant escalation in Covid-19 infection rates in individuals testing positive over the weeks and months ahead and, in order for the service to be effective, positive cases needed to be contacted within 24 hours and their close contacts within 48 hours of notification to the contact tracing system. The main purpose of the Rapid Review was to support the ongoing and future delivery of the contact tracing function by looking at the elements of the CTS that had worked well to date, and to consider what measures were required to effect improvements in the service, with a focus on more efficient and effective contact tracing processes, supported by appropriate technology and providing high quality management information.

185. The Rapid Review established a number of key findings which were subsequently taken forward by the PHA and the Department. Delivery of this work was supported through the appointment to PHA of a Director with responsibility for the Covid-19 Contact Tracing Service in NI.

EU Exit Preparations

186. Whilst the preparations across the UK for EU Exit did divert some of our focus away from pandemic preparedness planning during this period, undoubtedly the many aspects of additional training, improvements in the resilience of supply chains and the preparedness to manage the potential consequences of EU Exit were nevertheless advantageous. This was not just in relation to our local and regional increased buffer stocks and stockpiles for medicines and medical devices/clinical consumables, but also in relation to enhanced multi-agency command and control training and exercising that was undertaken, right across all NI Government Departments and multi-agency responders.

Overview of Preparedness

187. Whilst planning and preparedness are vitally important to being able to mount an effective response quickly, it is debatable whether any amount of planning or preparation could have fully prepared us for, or anticipated the scale and impact of, the Covid-19 pandemic. Nor could we have anticipated the scale of the measures that we would have to take to protect those most at risk and at the same time prevent our health and social care system from being overwhelmed. That said, it is imperative that we ensure that across the whole of Government, and across the UK more generally, there is longer-term horizon scanning to identify future risks. It is also critical that we actively build future capacity and capability across Government, through our existing structures and mechanisms at both UK and NI level, to identify and respond to future risks and that we test the resilience of that capacity and capability on an ongoing basis.

188. Since 2000, we have experienced significant epidemics and pandemics including the emergence of SARS in 2003, the H1N1 influenza pandemic in 2009, MERS in 2012, along with major epidemics of Ebola in West Africa in 2014-16 and more recently Zika virus in Brazil in 2016. While the impact of these on the UK was less severe, the preparation required for what might happen was significant for all 4 nations in terms of planning. The benefit of this is that it helped to maintain a significant degree of pre-pandemic preparedness and experience in the Department, the PHA and the HSCB (now SPPG in the Department) and related bodies across the UK. Without this level of preparedness and experience, coupled with the public health and scientific expertise accumulated over many years, the outcome of this pandemic could in my view, have been very different.

189. Within a few weeks of the SARS-COV-2 virus being identified, because of the sharing of the genotype by scientists in China with other scientists, the Regional Virus Laboratory in NI, along with only a handful of centres across the UK, had the ability to test for the virus. A cross-UK approach to setting up community testing at scale meant that additional capacity could be offered more efficiently and to areas needing it most, and built resilience into the system (for example, if one laboratory was suddenly out of operation, samples could easily be diverted to others). Although some elements of delivery and policies varied across the UK, approaches to testing were underpinned by the same evidence base and testing principles and a major lesson from this pandemic is the value of joint working across the four nations.

190. The research capability in the UK was a strength in providing the answers to important questions and undoubtedly had a major role in turning the response to the Covid-19 pandemic from a broader based societal approach, with very significant implications for the public, to a more focused one with medical countermeasures such as vaccines, drug treatments and other improvements in clinical management. This important role of research in the pandemic is covered more fully in the four UK CMO Technical Report (see Chapter 3, pages 107 to 119), referenced earlier at paragraphs 107 and 182.

EU Exit impacts

191. Following the EU membership referendum in June 2016 there was initially little or no impact on science / medical science capacity in relation to health. Gradually over time since 2016 a degree of regulatory divergence between NI and GB has emerged which has had some impact on medicines availability and the conduct of clinical trials (specifically in relation to medical devices regulations and in vitro diagnostics regulations at present). In addition, there have been impacts because of reduced access to some EU funding schemes in the science area, in common with the rest of the UK.

192. During and immediately prior to Covid-19 the primary source of scientific analysis and advice was through UK systems (e.g. SAGE) feeding into NI specific structures. The primary source of external advice to RoI was through participation in EU structures. There was some sharing of this advice and analysis between NI and RoI through regular meetings of CMOs and relevant senior officials, as described earlier (in paragraphs 92 and 131-136).

193. The implications of EU Exit on the availability of, and regulatory framework for, medicines in NI resulted in significant work for the CPO and her team within the Department. The establishment of the EU Exit framework for medicines could not be set aside or delayed, and work on that continued throughout the pandemic. Indeed, these EU Exit related arrangements and actions taken during the pre-pandemic period across the UK to strengthen supply chains appeared to be advantageous during the pandemic.

Lack of a Northern Ireland Executive

194. Whilst the Department was unable to complete work on proposals for new public health legislation due to the collapse of the Northern Ireland Executive on 9 January 2017, as a mandate was already in place for key pandemic preparedness and resilience policies, these areas were not affected by the absence of a functioning Assembly during the specified period between 2017 and 2020.

Institutional learning

195. As noted earlier (in paragraph 48) the Department is the LGD for responding to the health consequences of emergencies – whether they arise from chemical, biological, radiological and nuclear (CBRN) incidents, or from infectious diseases or pandemics.

2009 H1N1 pandemic

196. In April 2009 the Department began preparations to respond following the WHO's announcement of an outbreak of H1N1 virus in USA and Mexico. The first confirmed case of swine flu in NI occurred in May 2009. Rates of infection in NI were much lower during the early months of the pandemic compared with hotspots in Great Britain. During the response, the four UK governments worked closely together to ensure a robust response to the pandemic threat.

197. One of the challenges was collation of information, which was not routinely collected nor collected in real time. Pressure was placed upon colleagues in the PHA, the then HSC Board (now SPPG within the Department) and the Department's Information and Analysis Directorate's statistical staff to provide rapid, up-to-date information on a regular basis. Another issue related to reporting of deaths due to H1N1, which was being reported by a number of different sources. To ensure the consistency and the timeliness of information being reported, a process was agreed in relation to the reporting of deaths due in a pandemic.

198. After the initial acute response to the outbreak coupled with the realisation that a second wave was likely, I established a Swine Flu Preparedness Programme Board in July 2009. The purpose of this Board was to ensure HSC planning and preparedness to respond to H1N1; to provide assurances to the Minister/Permanent Secretary; to ensure robust audit and governance processes were in place; to manage public resources effectively; and to ensure close collaboration across all HSC organisations.

199. As the pandemic reached its peak, the demand on senior staff in many of the organisations to respond to numerous requests for interviews and to counteract misinformation became totally unsustainable. I introduced weekly media briefing sessions, which I fronted with a panel of experts (all "trusted voices") from across Health and Social Care Trusts and PHA to more effectively manage the media issues and provide a forum for updating and educating journalists and the public simultaneously. This arrangement proved to be extremely useful and set a rhythm for proactive interaction with the media and reduced the number of ad hoc queries and burden on staff time.

200. A NI lessons learned review was conducted in September 2010 [see Exhibit INQ000183434] and the subsequent report published in November 2010 (contributed to the Department's planning framework and revisions to our Emergency Response Plan. In conjunction with the Hine Review of the UK Response [see Exhibit INQ000183435] which highlighted a range of good practice, this allowed the Department to build upon and improve planning for future outbreaks.

2010 Severe Winter Weather Response

201. December 2010 was one of the coldest Decembers on record in NI. We experienced several weeks of freezing temperatures pre-Christmas, followed by rapidly rising temperatures after Christmas, resulting in widespread burst water pipes. Reservoirs were quickly drained, leaving thousands of homes and businesses throughout NI damaged and without water for several days. As a result the Department (including Emergency Planning Branch), in collaboration with the then HSC Board and Public Health Agency, had to manage the impact of the severe weather on hospital services, GPs services and social care.

202. In 2011, as a result of the lessons learned from the response, the Department was asked to lead a Task and Finish Group to consider how best to respond to the needs of vulnerable people in an emergency. The key output from that work was the development of a Vulnerable People Protocol to define vulnerable people; assess the impact on these

groups in an emerging situation; maximise information available; and harness resources and support services available. My team developed this protocol to help support multi-agency groups responding to an emergency. It was tested and refined on numerous occasions following debriefs from local exercises and in light of lessons learned and recommendations made in debrief reports from responses to local emergencies.

203. Also at the behest of CCG(NI), the Department led another piece of work to deliver a Protocol for the Establishment of Emergency Support Centres (ESCs) as no single agency or organisation in NI had lead statutory responsibility for the provision of temporary accommodation in an emergency. Working with a range of multi-agency key stakeholders my team successfully delivered this Protocol, which was agreed jointly as part of a collaborative approach between partner organisations involved in the establishment or management of these centres.

2013 Severe Weather Event

204. During a severe weather event in 2013 the Department was asked to assume the role of Lead Government Department (LGD), leading what was essentially an operational response that had no identified health consequences. This was not in keeping with our strategic role as LGD for the health consequences of an emergency. Following a de-brief of the response, I raised a number of concerns to TEO regarding the lack of timely cross departmental co-ordination, particularly around escalation processes and the identification of an appropriate Lead Government Department to lead the response, and the proper utilisation of the CCG(NI) Vulnerable People protocol in an emergency. As a result of these and other concerns an escalation protocol was developed by TEO to make it clear which department would have LGD responsibility from the outset of a response.

2013-2016 Western African Ebola virus epidemic

205. The WHO declared the Ebola outbreak in West Africa in 2013 a Public Health Emergency of International Concern (PHEIC). The outbreak was the largest of its kind and cases were recorded in the UK as well as other European countries and the USA. Whilst there were no confirmed cases of Ebola in NI, a number of preparatory measures were put in place to mitigate against importation of the disease and to deal with the potential repatriation of UK residents exposed to the virus overseas.

206. Staff within the Department's Health Protection Branch had policy responsibility for infectious diseases and led preparations in the Department, supported by colleagues from Emergency Planning Branch (EPB). A range of protocols were developed in conjunction

with PHA, including patient care pathways, monitoring of returning healthcare workers as well as advice for a range of professions such as funeral directors, immigration officers, education authorities and police.

207. A major regional desktop exercise (Exercise Gueckedou) led jointly by the Department and PHA was held in October 2014 to review local preparedness and response arrangements to the presentation of a suspected Ebola case at a hospital in NI. A post-exercise report contained a number of recommendations, many of which were specific to managing Ebola but also more general recommendations, such as putting in place arrangements for a telephone helpline and ensuring that staff in all HSC organisations were aware of their organisations' Emergency Response Plans, including arrangements for coordination and escalation of response across the region.

208. In addition, DHSC provided Lessons Learned input from the Ebola Inquiry that highlighted that science and technology was used to inform a well-co-ordinated UK health preparedness and response structure in the UK. The necessary engagement and interaction between the Health Ministers, Chief Medical Officers and public health agencies in each of the 4 nations also benefitted from sharing science and technology information and in agreeing a UK communications strategy.

CMO/DCMO participation in exercises (both UK and local)

209. The Department has participated in and run a number of exercises to test various functions of an emergency response for the period in question. The detail of the wider exercises is covered in the Module One Corporate Statement and I will not duplicate the detail of this here.

210. In October 2016, Exercise Cygnus took place to test the UK's ability to respond to a severe pandemic influenza. This was a UK Exercise, cross government exercise, involving Ministers. In addition to the UK objectives, there were additional NI specific objectives. These included exercising the 4 Nations interface (at Official/CMO/Ministerial level) and Health Ministers; decision-making processes and the interface between NI Health Gold and HSC Silver; exercising strategic decision-making processes around managing the wider consequences and cross-government issues at local level during an influenza pandemic (such as excess deaths), including the activation of the NI Central Crisis Management Arrangements; and to exercise the consideration and decision making processes in relation to receipt of scientific advice, including SAGE, during an influenza pandemic.

211. Departmental staff in EPB were closely involved in planning of the exercise to ensure that we contributed to delivery of the exercise simultaneously in each of the four nations. As part of exercise play across the three days of the Exercise, I participated in a series of scheduled meetings. This included:

- UK CMO's teleconferences;
- Cabinet Office Briefing Room (Officials) (COBR(O)) meetings;
- Cabinet Office Briefing Room (Ministerial) (COBR(M)) meetings, in the absence of Health Minister;
- Regional Health Command Cell (RHCC) Strategic Cell Meetings (this is the old terminology/name for HEALTH GOLD command)

212. From a UK perspective, the exercise reinforced the position that as a whole the UK was well prepared to manage a mild to moderate pandemic, but it also identified gaps in capabilities to overcome a severe pandemic. As a result, in 2017, the UK Government established the Pandemic Flu Readiness Board (PFRB), co-chaired by the Cabinet Office (CO) and DHSC to improve resilience in five key areas highlighted by Exercise Cygnus. The PFRB held its first four nations meeting on 31 May 2017. Meetings were initially monthly (determined by CO/DHSC).

213. In early 2018, a NI Pandemic Flu Sub-Group of the TEO-led NI Civil Contingencies Group was established to align with this work and oversee the ten recommendations from the NI perspective.

214. The Report into Exercise Cygnus published by DHSC also identified specific lessons learned which required consideration by four Nations CMOs. I asked EPB to take the lead on this and a NI Pandemic Flu Oversight Board (NIPFOG) was established in May 2018 to oversee the development of service-facing surge guidance for NI, incorporating primary, secondary and social care. However, this work was paused in preparation for EU Exit and the subsequent response to Covid-19.

215. In relation to local learning, a NI Lessons Learned Report identified a number of recommendations that had been highlighted for action in order to improve preparedness.

216. As indicated above, planning and preparedness is delegated to EPB and the Module One Corporate Statement covers the work undertaken by the Department in both these areas to implement these recommendations and as a result, I will not replicate the details here.

217. Whilst the CSA role was not tested in Exercise Cygnus, he did attend one key strategic meeting as an observer.

Other exercises

218. Dr Chada, as DCMO, also participated in a local exercise (Exercise Causeway Alpha) in November 2018, the aim of which was to facilitate departmental preparations to set up, support, staff and manage an Emergency Operations Centre because of a mass casualty event. Dr Chada also participated in a Clinical Advisory Group meeting, held as part of a UK Exercise Tiamat in September 2019, the purpose of which was to consider medical supply issues caused by EU Exit.

The value of simulation exercises and training

219. Exercises, training and simulations are essential in preparing for a response to an emergency however, they have their limitations. It is impossible to simulate the real pressures, for example the duration of an actual response, or the sustained pressures on key people. It can often be difficult to get protected time and buy in from key participants within one's own organisation to participate in a simulation exercise, given competing live priorities or indeed crises. For example Exercise Cygnus was delayed twice during planning due to a junior doctors strike and then in response to planning as a result of the Ebola outbreaks in West Africa.

220. Due to other more immediate/competing priorities it can also prove difficult to get other organisations to participate in planning effectively in order to get a realistic scenario that can fully test cross government co-operation in a simulation exercise. There is therefore a need for more collaborative working to develop the necessary capabilities and to ensure that these are regularly tested.

Assessing and planning for inequalities and vulnerabilities

221. The people who would be vulnerable in an emergency very much depends on the type of emergency. For example, in severe weather emergencies those who are vulnerable will be dictated by the impact of the weather, their geographical location, and the duration of the event.

222. I provided advice to the Department of Justice regarding the prisons system, and consideration was given to the impacts of the epidemic and restrictions on individuals living alone, the socially isolated (for geographical or other reasons), and those living in

houses of multiple occupancy. There was analysis of the impacts of social deprivation in terms of risk, and specific measures were taken to encourage vaccine uptake in areas of social deprivation and by communities where English was not the first language, in addition to a range of other considerations for various specific groups.

223. In relation to potential health impacts on specific groups, this is considered by the Department in collaboration with the PHA. The nature and extent of consideration is dependent on the nature of the health consequences of the emergency, which will dictate the appropriate response key. In the case of Covid-19, for example, there was early consideration of the impacts on the clinically vulnerable, including groups with various types of disability, with specific measures and guidance being provided at UK level, including from JCVI. This included specific advice being provided on the impact of the virus on the elderly and pregnant women.

224. During Covid-19 the regulations introduced to put Non-Pharmaceutical Interventions (NPIs) on a statutory footing were subject to regular reviews. 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 would have been reflected in the reviews which I approved. In the circumstances it was, however, not possible to carry out an Equality Impact Assessment on those individuals or groups with protected characteristics. The Health Intelligence Unit in the PHA developed an evidence overview on inequalities at the start of the pandemic. This was shared across the Department and used to inform policy and as appropriate. The Institute of Public Health Ireland (IPHI) also completed a review of the potential impact of the pandemic on the indicators in the Executive's Public Health Framework, "Making Life Better". In addition, the PHA also undertook work in relation to 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.

225. 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. I chaired the weekly Oversight Board which reviewed such data and agreed the plans for improvement.

226. The Department of Health published Coronavirus Related Health Inequalities Reports in both June and December 2020. These reports [see Exhibit INQ000183436] present 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.

Part 5: Lessons learned and future risks

227. After any response, it is good practice, to carry out a review into how well an incident or emergency response was handled to establish any learning or areas for improvement. Some lessons have been already identified from incidents, training and exercising and are covered above at paragraphs 195-218. Other wider departmental lessons are covered in the Module One Corporate Statement and I will not duplicate that detail here.

STATEMENT OF TRUTH

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

Signed: **Personal Data**

Dated: 12 May 2023