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

WITNESS STATEMENT OF PROFESSOR SIR MICHAEL McBRIDE

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

1. I, Professor Sir Michael McBride, Chief Medical Officer (CMO) for Northern Ireland (NI), make this statement in response to the request from the UK Covid-19 Public Inquiry ("the Inquiry) dated the 19 August 2024 under Rule 9 of the Inquiry Rules 2006 (SI 2006/1838), requiring the Department of Health (the Department) in NI to provide the Inquiry with a witness statement in respect of specified matters relating to Module 7. I make this statement on behalf of the Department and in respect of my specific roles and responsibilities as CMO for NI.

2. The direct and indirect consequences of the Covid-19 pandemic have been profound and enduring, and on a scale and severity not experienced since the 1918 to 1919 influenza pandemic. The response required by the public of NI, those working in health and social care, public health and researchers and academics in NI was without precedent. The pandemic has had a significant impact on individuals, families and communities across NI. Many lives have been tragically lost, and many are still living with the consequences of the pandemic.

3. Ultimately, effective treatment and vaccines provided our path out of the pandemic, weakening the link between infection and severe outcomes, allowing the move from the need for Non-Pharmaceutical Interventions (NPIs) and more restrictive measures and their damaging impact on the health and wellbeing of the population and wider

society. Prior to the development of effective vaccines and treatment, NPIs, testing for Covid-19, contact tracing and isolation formed major elements of the strategic policy response and were important in reducing and controlling community transmission. Particularly in the early stages of the pandemic during the first wave, the limitations in diagnostic capacity to test for Covid-19 resulted in some difficult policy decisions for Ministers with respect to the prioritisation of tests and limited our understanding of how rapidly the pandemic was growing across the UK.

4. The Department again offers its profound thanks to all those working across the Health and Social Care (HSC) system, in primary care, community pharmacy, the community and voluntary sector, local government, other public and private sector organisations and academia, and to all those who volunteered to deliver care, provide testing and to support contact tracing. I wish to acknowledge all those who provided support in the supply chain, addressing significant logistical and operational challenges, those who supported new information systems, and provided security at our Covid-19 test sites in the roll out of the largest population testing and contact tracing programmes ever undertaken in NI. Through the tireless efforts of many, undoubtedly, lives were saved and many avoided more severe disease with all its consequences. Were it not for the response and altruism of the people of NI and across these islands to protect themselves and others more vulnerable undoubtedly the consequences would have been much worse.

5. The establishment of the testing and contact tracing programmes, their expansion, and the roll-out of new Covid-19 tests at a population level such as Lateral Flow Devices (LFDs) for self-testing or testing to support access to new Covid-19 treatment pathways, was assisted by informed public communications and media reporting and coverage. Collaboration across Government Departments was also evident, for example with the Department for Communities (DfC) and the Department of Education (DE) and the role of Executive Information Service (EIS) colleagues in The Executive Office (TEO) in NI, for example, with respect to communication on testing and contact tracing in community settings and schools, and in wider public information and communication. Similarly, across the United Kingdom (UK) and with the Republic of Ireland (RoI) there was sharing of knowledge and learning arising from the many challenges encountered, including with the UK scale up and rollout of testing of Covid-

19 as part of the National Testing Programme described later in this statement, and in relation to the evolution of testing policy and use of tests more generally.

6. Through the collective commitment, and much innovation, many challenges were addressed in both the roll out and expansion of testing capacity in laboratories in NI and across the UK and the linked Test, Trace, Protect Strategy (TTP) - as the testing and contact tracing programme in NI became known. This was achieved through the collaborative approach taken by the Public Health Agency (PHA), primary care teams, community pharmacy, the Health and Social Care (HSC) Trusts in NI, the Health and Social Care Board (HSCB) (now the Strategic Planning and Performance Group (SPPG) within the Department) working with patient representative groups, community organisations, and professional bodies and organisations. My observation was that this was a consequence of effective leadership, coordination, engagement and communication at all levels with a singular commitment to protect those at risk. The Department developed highly productive and effective relationships with a wide range of stakeholders across many sectors, including with the Education Authority (EA), local universities and further education colleges, local government and employers across the public and private sector. This joint working facilitated a solution-based approach to the many inherent challenges that arose, while maintaining in so far as possible, access to routine health and social care treatment and support services and other public services with appropriate safeguards in place to limit the risk of transmission of Covid-19, while expanding testing and contact tracing capacity at a scale not previously undertaken. Testing policy and protocols were continuously reviewed and updated as more became known about the virus, testing capacity expanded and new validated tests became available and as new vaccines and treatments reduced the risk of severe illness, hospitalisation and death. Similarly, the approach to the TTP Strategy was also reviewed and updated throughout the pandemic response.

7. My reflection in all of this is that there were no easy or straightforward answers or solutions to the many challenges faced, however the collective endeavour of all ensured that research, innovation and operational logistics and delivery came together in an unprecedented national effort. It is incumbent on all of us that we use the opportunity of this Inquiry to learn the lessons regarding what worked well and what didn't and what can be improved; and to hear of the experiences of those most directly

affected. It is my sincere hope that, through this Inquiry, learning might be identified that ensures that should the need arise again, we are as prepared as possible for the next pandemic.

8. The focus of this statement is the role that the Department and I played in the response to the Covid-19 pandemic with respect to testing for Covid-19 and the Covid-19 Testing Strategy, contact tracing in keeping with the TTP Strategy, and in relation to policy choices regarding isolation of cases and close contacts.

9. I have written this statement to the best of my recollection of events and key decisions as they occurred and with significant input and support from policy and professional colleagues within the Department who were involved in all aspects of the TTP Strategy, oversight and delivery.

10. Given the complexity and pace of events, the number of key decisions made and the passage of time, it is inevitable that some of my recollections may be incomplete. Where my recollection is less clear, I have considered available written records to assist me. I have also sought input from other colleagues within the Chief Medical Officers Group (CMOG) and across the Department (including colleagues in SPPG) to help prompt my recall of events. Where I am unable to recall the specific details, I have indicated what would have normally occurred in the context of the circumstances in question.

11. I would like to highlight for the Inquiry that this statement has been prepared with input from key personnel in the Department relevant to the scope of Module 7: Professor Ian Young (Chief Scientific Advisor (CSA)), Professor Lourda Geoghegan (Deputy Chief Medical Officer (DCMO)) with oversight for Covid-19 testing and contact tracing, Dr Naresh Chada (DCMO) who along with the PHA provided advice to the Department of Education, and Kieran McAteer (Director of Covid-19 Response).

Introduction to TTI in Northern Ireland

Overview of the Role of the Department of Health

12. An overview of the role, functions and responsibility of the Department with a focus to the scope of Module 7 is provided in paragraphs 13 to 31. The powers and responsibilities of the Department for the Test, Trace, Isolate (TTI) policy in NI, strategic oversight of this system and the role of the NI Executive and relationship with the UK Government with respect to each element of the programme are described in paragraphs 40 to 76. Paragraphs 77 – 95 provide an outline description of test, trace and isolation policy delivery in Northern Ireland. Further detail on these core elements of Module 7 scope is set out in later sections of this statement. Finally paragraphs 96 and 97 provide an overview of engagement with Voluntary, Community and Social Enterprise Groups.

Role, Function and Responsibilities of the Department

13. The Department is one of nine departments which comprise the NI Executive. The Department's role, functions, and responsibilities both prior to and during the pandemic fundamentally remained the same. 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 NI; the prevention, diagnosis and treatment of illness; and, the social wellbeing of people in NI. The *Health and Social Care* is not a separate organisational entity but rather encompasses the integrated system of health and social care delivery in NI and its delivery agents.

14. 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.

15. There were 17 ALBs during the pandemic, reduced to 16 following the dissolution of the Health and Social Care Board (HSCB) in March 2022. The Strategic Planning and Performance Group (SPPG) of the Department of Health was established on 1 April 2022. The HSCB was dissolved on 31 March 2022 and its previous functions were transferred to the SPPG.

16. Prior to 1 April 2022 the Department's principal service delivery objectives for HSC commissioners and HSC Trusts were set out in detail in the annual Health and Social Care Commissioning Plan Direction. The annual Health and Social Care Commissioning Plan Direction was issued by the Department to the HSCB, the ALB responsible for the commissioning of health and social care services in NI. When the HSCB was dissolved on 31 March 2022, its functions were, in the main, transferred to the Department, and its staff were transferred to the HSC Business Services Organisation (BSO). The dissolution of the HSCB meant that there was no longer any requirement for the Department to issue an annual Health and Social Care Commissioning Plan Direction.

17. In October 2020, the Minister of Health for NI (Health Minister) approved a programme of work on the development of an Integrated Care System (ICS) model in NI. The model will aim to promote and enable integration and partnership working across the HSC, and with external partners, to deliver improvements in population health outcomes and health services [MMcB7/001 - INQ000114846].

Emergency Response Role of the Department

18. In April 2010, in line with Cabinet Office best practice guidance, the Department defined its Lead Government Department role [MMcB7/002 - INQ000145671] for responding to the health consequences of emergencies arising from chemical, biological, radiological and nuclear incidents; disruptions to the medical supply chain; human infectious diseases; and mass casualties.

19. The Civil Contingencies Framework for NI (2011) [MMcB7/003 - **INQ000086932** published by TEO, also required the Department to maintain, review and update its Emergency Response Plan (ERP) [MMcB7/004 - INQ000184662] and to test and

exercise the plans response arrangements. This was to ensure the Department's ability to deliver an effective response to minimise the health and wider impacts of the emergency on society, for which it had been designated lead Government department. The Department will also provide strategic health and social care policy advice and/or direction in support of the efforts of others, including its associated agencies[1] and ALBs in response to emergencies for which it had been designated lead. In such circumstances, the Health Minister is required to lead, direct and co-ordinate the response for NI, reporting as necessary to the NI Executive under the Northern Ireland Central Crisis Management Arrangements (NICCMA) Protocol [MMcB7/005 - INQ000103601] when an emergency has been categorised as Serious or Catastrophic and requires a cross-departmental or cross-governmental response.

20. The severity and complexity of an emergency will dictate the level of involvement of the Department in the health response to it and whether activation of Health Gold Command is required. The structures, systems and processes involved in responding to an emergency are defined within the Emergency Response Plan (ERP) 2019, and it was this response plan that was activated in January 2020 in response to the emergence of the SARS-CoV-2 virus which is responsible for the disease that became known as Covid-19. This ERP was reviewed and updated in 2024 [MMcB7/006 - INQ000503896]

21. Health Gold Command consisted of two key elements: the Strategic Cell and the Emergency Operations Centre (EOC). The Strategic Cell provided strategic health and social care policy advice to the Health Minister. It also provided health, social care and public safety advice, direction and leadership to HSC organisations and to other departments/organisations. The second element, the Emergency Operations Centre, was responsible for management of the flow of information into and out of the Strategic

[1]Health and Social Care Board (dissolved April 2022) Northern Ireland Blood Transfusion Service, Northern Ireland Medical and Dental Training Agency; Northern Ireland Guardian ad Litem Agency, Northern Ireland Social Care Council, Northern Ireland Fire and Rescue Service (NIFRS); Northern Ireland Practice and Education Council; Public Health Agency (PHA); Business Services Organisation (BUSINESS SERVICES ORGANISATION); Patient and Client Council (PCC); Northern Ireland Ambulance Service (NIAS); Western Health and Social Care Trust (WHSCT); South Eastern Health and Social Care Trust (SEHSCT); Belfast Health and Social Care Trust (BHSCT); Southern Health and Social Care Trust (SHSCT); Northern Health and Social Care Trust (NHSCT); Regulation and Quality Improvement Authority (RQIA)

Cell between the Department and HSC sector, and the wider NI Executive departments and UK Government. Activation of the EOC is not reliant on the full activation of both key elements of the Health Gold Command structure and can operate without activation of the Strategic Cell. However, the Strategic Cell requires the support of the EOC to function.

Shared Responsibilities with other NI Departments

22. The Department also works in partnership with other NI Executive departments to develop and implement cross-cutting policy which is designed to improve the health and wellbeing of the population and in areas such as suicide prevention, addressing the harms of tobacco products, alcohol and drugs, tackling homelessness and the safeguarding of vulnerable adults and children. There was at times considerable cross-Departmental working in NI in the delivery of the TTP Strategy. The NI Executive was kept informed of key changes in relation to the TTP Strategy by the Department and weekly reports on testing and contact tracing were provided at each NI Executive meeting. Details are set out later in this statement.

Structure and Senior Leadership

23. The diagram provided at [MMcB7/007 - INQ000137413] sets out the Department's organisational structure at policy group level, its senior leaders, and their respective group areas of responsibility as of 1 January 2020. The senior officials and professional officers identified in the diagram comprise the Department's Top Management Group (TMG), now known as the Senior Leadership Team (SLT), and the Departmental Board. TMG and the Departmental Board have responsibility for the overall corporate governance of the Department and ensuring that the Health Minister's policies and priorities are implemented in compliance with all statutory, regulatory and financial management requirements to which NI Executive departments adhere. Both TMG and the Departmental Board are chaired by the Permanent Secretary who is the Department's Accounting Officer. The Permanent Secretary is also the overall Chief Executive and Accounting Officer for the statutory-based health and social care bodies in NI, reporting to the Health Minister. Exhibit [MMcB7/008 -

INQ000137414] provides TMG's respective roles and responsibilities both before and during the pandemic.

24. TMG has regular weekly meetings. The Departmental Board, which also has two Non-Executive Directors among its membership, meets every two months. TMG is the main vehicle for managing the Department on a day-to-day basis whereas the Departmental Board has oversight for monitoring the effective discharge of corporate governance. Whilst not formally stood down during the pandemic, the frequency of Departmental Board meetings was reduced. This meant that only two meetings were held in 2020, and three meetings were held in 2021. This reduction in meetings was to permit the Department to focus on the significant additional workload arising from the pandemic. TMG weekly meetings were also paused from 19 March 2020 to 18 May 2020 as the Department's senior team were fully engaged in leading the emergency response.

Overview of the Role of the Department in Relation to the Scope of Module 7

25. The following paragraphs provide an overview of the specific role of the Department in relation to the TTI policy within the scope of Module 7. Implementation of the Covid-19 TTP Strategy, was central to the NI Executive's planned pathway out of the pandemic [MMcB7/009 - INQ000100976] and the testing and contact tracing programmes were the subject of significant political scrutiny and media interest. The policy and supporting operational delivery arrangements of the programme were extremely complex and fast moving with the added logistical challenges of implementing an entirely new population wide testing and contact tracing programme at a scale that had not been previously undertaken. This required the collective and collaborative efforts of many stakeholders both within the health and social care sector - including the PHA, HSC Trusts, the HSCB, primary care, community pharmacy, care home providers, and respective professional and policy colleagues in the Department - and across the wider NI Civil Service and wider public sector.

26. While the Department retained control of all strategic and policy matters in relation to testing and contact tracing and setting isolation policy advice throughout the pandemic, the PHA was the lead operational and coordinating body in NI for both the testing and

contact tracing programmes. The PHA and all other public health bodies across the UK and internationally faced significant and sustained challenges in responding to the pandemic particularly given the intensity and duration of the response. The Department and the PHA by comparison had, by some way, significantly less resource available as compared to other UK jurisdictions with similar policy and legislative responsibilities. Given the complexity and many interrelated key dependencies, in general, a collective and integrated approach was taken to aspects of the policy and strategic operational response. The approach to testing and contact tracing are examples of this.

27. Given all these considerations it is the Department's view that it was appropriate and efficient to take an integrated policy and operational approach which was coordinated and led by the Department. This collective approach also sought to ensure effective alignment and oversight. This position subsequently changed when responsibility for both the strategic and operational delivery of the Covid-19 Contact Tracing programme transferred to the PHA at the end of September 2020, while the Department continued to retain control of all policy matters in relation to testing, contact tracing and isolation advice. This is explained in greater detail later in this statement.

28. From the Department's perspective, these arrangements ensured appropriate strategic leadership and direction consistent with the role and responsibilities of the Department within the ERP, ensured alignment of policy, and provided the necessary oversight and governance for this key element of the pandemic response. As previously described, as the Lead Government Department for health issues, the Department leads the response to health emergencies and the activation of Health Gold is the most significant response level available to the Department. The Health Gold Structures are designed to be modular and therefore flexible and scalable. Once the ERP was activated, the EOC was stood up, supported by Health Silver which is comprised of the PHA, HSCB and BSO. Health Silver leads on the tactical co-ordination of the HSC response. The Strategic Cell operates separately to the EOC under the Department's Health Gold arrangements. The Strategic Cell was chaired by myself as CMO, and I had responsibility for ensuring the coordination of the planning and preparation for the surge response in the first wave of the pandemic. Activation of the Strategic Cell also included the establishment of multiple subject-specific Cells which focused on specific

areas of response to the pandemic. The principle of subsidiarity applied within these arrangements, where respective cell leads made decisions and, only where necessary, escalated matters to the Health Gold Strategic Cell. Cell leads were responsible for preparing for, monitoring of and responding to the impact of the pandemic in their cell's specified service delivery or policy area as well as addressing matters raised by Health Silver. As such, the respective cell leads played a key role in the pandemic response and its coordination across the health service in keeping with the arrangements outlined in the ERP. In due course the Department transitioned from the Health Gold emergency response arrangements to the Integrated Covid-19 Gold Command of the Rebuilding Management Board.

29. The PHA leadership team, the Chief Medical Officer Group (CMOG) which was led by myself and included my professional and policy colleagues and expert advisors (DCMOs, CSA, Chief Pharmaceutical Officer (CPO) and Chief Dental Officer (CDO)) worked together to ensure the most effective arrangements to address emerging issues and challenges and the many demands faced. This collaboration and collective endeavour was facilitated by the establishment of a number of strategic oversight boards, which I chaired as CMO, such as the Test, Trace, Protect Oversight Board, the detail of which is set out later in this statement. A number of expert advisory groups such as the Expert Advisory Group on Testing (EAG-T) were led at Director level within the PHA acting on behalf of the Department. There were a number of more tactical operational PHA groups supporting the TTP Strategy and PHA would be best placed to provide the Inquiry detail of these.

30. At all times of necessity, and by design, the Department had to adopt a flexible and adaptive approach to the strategic coordination of the response to the pandemic. Given the unprecedented demands and in the context of finite capacity, the Department, the PHA and the HSC therefore had to make most effective use of extant skills and experience across the HSC system, which was augmented by the input and support of previously retired colleagues and others redeployed from within and outside the Department. The need for greater agility in the redeployment of people across the NI Civil Service and the wider HSC system is an important learning point for future pandemic preparedness and planning. Ultimately, the Department from a policy and professional and technical perspective, sought to ensure strategic policy decisions

were informed by expert professional advice and that all aspects of the TTI policy programme was managed and coordinated, through very close working with the PHA who led and coordinated the operational delivery.

31. These arrangements were appropriate and proportionate in providing strategic direction and regional coordination and alignment of the public health response. They also served to optimise the public health expertise and capacity available to deliver the pandemic response in NI, while reducing the potential for duplication and fragmentation of the public health elements of the overall response. Furthermore, given the responsibilities of the Department with the activation of the ERP, the centrality of the testing and contact tracing as key elements of the pandemic response and the very considerable public and political scrutiny anticipated, the Department believed that it would be expected and necessary to oversee the strategic policy aspects of the public health response in NI including the Covid-19 testing programme and the contact tracing programme.

General Funding

32. The general means of funding provided to the Department is through the Department of Finance (DoF) in NI. The Department is provided with an opening budget and any easements are declared or additional funding requirements are bid for through "Monitoring Rounds" in-year (June, October and January). Transfers of funding both between other NI departments and from other UK departments (via HM Treasury) are also processed through the DoF at a Monitoring Round.

33. The pandemic covered a number of financial years, and the impact of the pandemic is still ongoing. The Covid-19 pandemic commenced in the 2019/20 financial year, and the main impact of Covid-19 was within the 2020/21 and 2021/22 financial years. There were still significant Covid-19 related costs being incurred in 2022/23.

34. During this period, additional funding exercises were commissioned by the DoF to determine requirements and redistribute ring fenced Covid-19 funding in addition to and/or alongside Monitoring Rounds. The Department also received Budget Cover Transfers (BCTs) directly from the Department of Health and Social Care (DHSC) for

Covid-19 Testing during the pandemic. This Budget Cover Transfer supplemented the general funding arrangements underpinning the National Testing Programme across the four UK nations whereby, in summary, NI and the other Devolved Administrations received a Barnett (population-based) share of National Testing Programme capacity in lieu of the consequential funding they would otherwise have received from health spending in England. Outputs funded under the National Testing Programme, managed centrally by DHSC and later the UK Health Security Agency (UKHSA), included for example delivery of the public facing Covid-19 PCR testing sites and the supporting laboratory processing capacity, and procurement of new Covid-19 test technologies (for example Lateral Flow Devices). This is covered in more detail in a later section regarding the National Testing Programme including in relation to funding arrangements.

35. While Covid-19 commenced in 2019/20 and some Covid-19 related costs materialised in that year, these costs were contained within existing budgets. In 2020/21 the Department received £989m of additional resource Covid-19 Funding. However, final spending on Covid-19 exceeded this budget by £11.1m, with the overspend authorised by the DoF. In 2021/22 the Department received £610m of additional resource Covid-19 Funding, including a Budget Cover Transfer of £49m in relation to Covid-19 Testing, and the underspend against this was £3.3m. As part of financial reconciliations undertaken by UKHSA which underpinned the National Testing Programme funding across the UK, BCTs were calculated by UKHSA and transfers made as required in relation to each relevant financial year (in addition to the £49m for 2021/22, BCTs were made for 2022/23 (circa £5m by DoH to DHSC) and 2023/24 (circa £26.7m by DHSC to DoH). Resource spending included: support for the health and social care workforce, including a one-off acknowledgement payment for service during the pandemic; support for additional service delivery, including testing and contact tracing; support for independent providers of health and social care; purchase and consumption of PPE; revenue costs associated with capital works; and additional support costs including increased cleaning.

36. Capital funding of £70m was provided in 2020/21, with an underspend of £2.4m declared at year end. This underspend relates to £1.65 million being held as unallocated Covid-19 capital funds at end year with a further underspend of £782,000

reported by Health organisations in their final end year spend returns. The underspend relates primarily to medical equipment, IT and capital works.

37. In 2021/22 the Department received an additional £15.7m of capital in relation to Covid-19, reporting an underspend of £1.5m at year end. This underspend, relating to capital works schemes and IT related schemes, was £370,000 being held as unallocated funds at year end with a further £1.1 million reported by Health organisations in their final year spend returns. Capital spending included purchase of medical equipment including oxygen generators, capital works to provide necessary adaptations to facilities, ICT to support homeworking and other IT infrastructure developed as part of the Covid-19 response, such as the Test, Trace & Protect contact management system for TTI.

38. Funding for individual initiatives would have been considered in line with the guidance issued by the command and control structures and later the Covid-19 Finance Process and Approvals Guidance [MMcB7/010 - INQ000130406]. To the best of the Department's knowledge, finance did not have an impact on the decision making process during the period covered by this statement (1 January 2020 to 28 June 2022), as the overarching assumption was that the funding required for the necessary response would be made available. However, the availability of surplus funding at the end of 2020/21 did lead to additional responses to the pandemic that may not otherwise have been undertaken.

39. As CMO I would not have been directly involved in general funding or financial considerations other than at a high level. While not directly involved in final financial decision or approvals however I am satisfied that the information provided is accurate.

Decision Making Structures

40. Strategic and policy decisions within the Department are made by the Health Minister. The normal process for a decision by the Health Minister is for officials to provide the Health Minister with a 'submission' detailing information, options if appropriate, and the advice and recommendation of officials. However, in some instances decisions met the criteria set down in the Ministerial Code [MMcB7/011 - **INQ000262764** which requires individual Ministers to refer the decisions to the NI Executive for its consideration. The criteria for referral of Covid-19 related decisions to the NI Executive were routinely met during the Covid-19 pandemic,for example where a matter was deemed significant or controversial, cut across the responsibilities of two or more Ministers, or required the adoption of a common position. In relation to TTP, in general, while the NI Executive was kept updated in relation to key strategic decisions in a timely manner, decisions were taken by the Health Minister. Policy decisions in relation to testing, tracing and isolation to support International Travel and Travel within the Common Travel Area were made by the Department, in agreement with the NI Executive.

41. The role of Departmental advisors, including myself, and officials during a pandemic is exactly the same as that needed outside of a pandemic, i.e. to provide information and advice to Ministers. The constitutional position is that it is the Health Minister's responsibility to take decisions. In doing so they take account, as they wish, of the information and advice they receive from their advisors, officials and any other source they wish to engage with. The advice included in submissions can be set out as specific recommendations and/or as options for the Health Minister to consider. Ministers have a right to expect that the advice they are receiving from myself, my professional colleagues, policy colleagues and from Health Care Professionals, is well founded in evidence and is appropriate.

42. However, Ministers are not required to follow the advice they receive. The ability to make independent decisions is a Minister's prerogative. Sometimes Ministers will require further work to be undertaken in respect of a proposed course of action, to fully satisfy themselves before making a decision. This again is a Minister's prerogative. These things are much more likely to occur when a decision is particularly difficult,

controversial or is required to address circumstances which are not fully within the Department's or the Health Minister's control, or in the case of Covid-19, not fully within the control of the NI Executive.

43. Over a long period of time during the pandemic, Covid-19 related decisions were also being made in circumstances where there was often an incomplete and emergent evidence base, and it was a case of having to act on the best available information and evidence in a rapidly changing and very complex environment. This was true also in relation to matters within the scope of Module 7, as the pace of change in relation the scientific and epidemiological evidence base and in turn policy was often emerging and fast moving throughout the pandemic. Over the course of the pandemic, knowledge of all aspects of the virus, including its transmission, evolved. A number of decisions involved matters relating to personal and public freedoms (some relating to potential consequences for life and death) and because of this by their very nature, these decisions were difficult. The consideration of the necessity for further NPIs in the context of an increasing infection rate, or the emergence of new variants of Covid-19, which were more transmissible and resulted in more severe disease were examples which posed challenges for decision makers.

44. As described at paragraph 20 above, the Department's Emergency Response Plan was activated in January 2020 [MMcB7/012 - INQ000137322 and MMcB7/013 - INQ000137323], with the stand up of the EOC on 27 January 2020 in response to the developing situation and to ensure that all relevant information was appropriately shared across the Department and with the HSC. At the time the decision to stand up the EOC was made, the situation in Wuhan, China was rapidly developing. The main responsibility of the EOC was to coordinate information, in collaboration with policy leads and the wider HSC ALBs, and to provide SitReps on health and social care related matters. This involved receiving and reviewing the daily "HSC Silver SitReps" and, beginning on 20 March 2020, escalating issues to the NI Hub, which is part of Civil Contingencies Group NI, to inform the "NI SitRep."

45. Health Silver arrangements were also activated by the PHA and HSCB to coordinate the preparation and response to the developing situation across the health and social care sector. It is my understanding that the decision to activate Health Silver was made

by the PHA in conjunction with the HSCB. On the 22 January the PHA wrote to me [MMcB7/014 - INQ000425514] to advise that they had established HSC Silver to coordinate the response to what was then known as the Wuhan coronavirus.

46. An extraordinary meeting of TMG was held on 4 March 2020. A note of that meeting [MMcB7/015 - INQ000103631] which confirmed the TMG's agreement to full activation of the Health Gold Command was circulated the following day, advising that the Strategic Cell had been convened and would have its first meeting on 9 March 2020. On 9 March 2020 the Department activated Health Gold Command in line with the guidance set out in its Emergency Response Plan 2019 [see MMcB7/004 - INQ000184662] regarding the levels and approvals necessary to stand up.

47. The PHA, the HSCB and BSO, collectively known as HSC Silver [MMcB7/016 - **INQ000102841** provided regional coordination of the HSC response to the pandemic. The Silver response was aligned with the strategic objectives set by Health Gold.

48. The diagram provided at [MMcB7/017 - INQ000103633] provides the overall organisational structure for Health Gold Command which was comprised of the Strategic Cell and 13 subject-specific policy cells. This included a Testing and a separate Contact Tracing Cell [MMcB7/017a- INQ000185384] which provided information regarding testing and contact tracing capacity and performance as appropriate, including the escalation of matters requiring a policy or strategic decision.

49. The principle of subsidiarity applied within each cell, with the cell being responsible for preparing for, monitoring and responding to the impact of the pandemic in its specified service delivery and or policy area and in addressing matters raised by Health Silver. As such each of the Cell leads provided key leadership to areas of the response and support to me as Chair of the Strategic Cell. All of this required the ability to respond to new and complex emergent issues through the development of new processes, guidance or policy. Where necessary such matters were escalated to Health Gold Strategic Cell.

Overview of the Role, Functions and Responsibilities of the CMO

50. I have been the CMO for NI since September 2006. As CMO, I am the most senior Health Professional within the Department and in that role, I undertake both advisory and statutory functions on behalf of the Department and I am accountable to both the Health Minister and Permanent Secretary. Although I am accountable to the Health Minister and Permanent Secretary, the advice I provide is independent professional advice, free of any political consideration or influence. I am also a member of the SLT (formerly TMG).

51. As CMO I have a wide range of roles which cut across my professional, executive and leadership responsibilities within the Department and in relation to its direction and oversight of HSC organisations, which plan and deliver services for the population of NI. I play a key role in leading and driving strategies and policies to improve health and well-being and reduce health inequalities. My office is the 'key professional advisor' to the Health Minister, the Permanent Secretary, and other Departments on medical matters, whilst also being responsible for ensuring the effective discharge of a number of statutory responsibilities, for example, safeguarding the health of the population in relation to communicable disease and environmental health and chemical hazards. I also provide professional leadership to the medical profession in NI. In addition, I liaise with my CMO counterparts across the UK and the Republic of Ireland ("RoI") on a collaborative basis concerning public health issues.

52. Throughout the pandemic, I was the designated Departmental lead with sponsorship responsibility for the Regulation and Quality Improvement Authority (RQIA) and the PHA on behalf of the Department.

Chief Medical Officer Group (CMOG)

53. During the Module 7 relevant period, CMOG, which I am head of, comprised a number of policy directorates: COVID-19 Response Directorate (which was established in September 2020 to oversee policy in relation to Testing and Contact Tracing); the COVID-19 Strategy Directorate (established in June 2021 and which oversaw a range of new evolving responsibilities including Waste Water (WW) Surveillance); Population

Health Directorate which, at the time, included responsibilities for Health Improvement, Health Protection and Emergency Planning, vaccination programmes, and population health screening programmes; Pharmacy Directorate which includes the dissemination of guidance from the National Institute for Health and Care Excellence ("NICE") (which included Covid-19 related advice and guidance); the Chief Dental Officer; and Quality, Safety and Improvement Directorate which includes policy responsibility for Serious Adverse Incident Reporting and investigation and guidance on certification of deaths. Through these Directorates I had overall responsibility for all domains of public health policy, including the TTI, for which I was the Senior Responsible Officer. CMOG was subsequently restructured with the establishment of a Health Protection Directorate and an Emergency Planning Resilience and Response Directorate following an internal review within CMOG.

Sponsorship of PHA

54. CMOG, on behalf of the Department, Minister and Departmental Accounting Officer, acted during the pandemic as sponsor for the PHA and ensured the maintenance of effective relationships through regular engagement and formal sponsorship meetings ensuring the right balance between PHA operational independence and appropriate and proportionate oversight and governance [MMcB7/018 - INQ000408120]. The PHA plays a central role in the implementation of health protection policy, including emergency preparedness and pandemic response, working jointly with the then HSCB, now SPPG within the Department. The PHA was the lead partner in relation to oversight and coordination of testing and contact tracing delivery and the many effective working relations that had built up over time by myself and my team were, in the Department's view, critical to the support, oversight and delivery of this important aspect of the pandemic response. The HSCB and its senior management team, supported by the PHA in keeping with their extant role and responsibilities, played a significant role in the oversight and coordination of the wider HSC response through their role within Health Silver reporting initially to Health Gold and later to the integrated Covid-19 Gold Command Group and the Management Board for Rebuilding HSC Services.

Public and Professional Communications

55. I had an important role in communicating with the public on key public health issues and actions that are important to protect and improve public health and wellbeing. This communication role was a crucial element of my responsibilities during the pandemic and took the form of providing advice, information, and data on a range of issues including what was known about the virus, the risk of severe disease, hospitalisation and death, and what people could do to protect themselves including at times advice and communications in relation to TTI.

56. During the pandemic, I, on behalf of the Department, issued (as necessary) circulars and guidance to the HSC, sometimes in conjunction with the other Chief Professional Officers at that time, including the Chief Nursing Officer (CNO), then Professor Charlotte McCardle, (followed by Linda Kelly acting CNO, and now Maria McIlgorm), the CSA, Professor Ian Young, the Chief Social Services Officer (CSSO), then Sean Holland (now Aine Morrison), the CDO then Michael Donaldson in an interim capacity (now Dr Caroline Lappin) or the CPO, Professor Cathy Harrison. This was done with the intention of keeping health service managers and frontline staff fully informed on developments such as testing, contact tracing, isolation requirements, therapeutic interventions, and NPIs, including travel restrictions and vaccination requirements. This also included issuing circulars providing regular updates to clinical guidance and advice on the Covid-19 testing protocols and isolation guidance as necessary. Throughout the pandemic the responsibility for operational delivery of testing, contact tracing and infection prevention and control within HSC Trusts remained with the Trusts with the PHA providing expert advice as required in complex situations which included the management of outbreaks.

Professional and Technical Advice

57. A key part of my role was to provide advice to the Health Minister and to the NI Executive on their response to the Covid-19 pandemic. I was regularly supported in providing this advice by the CSA and two DCMOs. In providing advice, the primary objective was to minimise the health consequences; save lives by preventing severe disease and deaths; prevent the health service from being overwhelmed; and ensure

that people could receive the care they required. It was recognised from early in the outbreak that this was a highly transmissible respiratory virus and while it was initially hoped that the outbreak might be contained and of limited duration this rapidly proved not to be the case. The general approach that framed the advice from myself and CSA is perhaps summed up best in the agreed initial UK Coronavirus Action Plan published on 3 March 2020 [MMcB7/019 - INQ000056154] with the priorities being "contain, delay, research, mitigate" as outlined by the Health Minister in his statement of the 9 March 2020. [MMcB7/020 - INQ000103639].

58. I also worked closely with the CMOs for England, Scotland and Wales to provide 4 UK CMO public advice to the UK Government and the Devolved Administrations and respective Ministers on a range of matters. Such 4 UK CMO advice included, for example, the August 2020 statement from UK CMOs on schools and childcare reopening and the raising and lowering of the Alert Level. With respect to the latter discussions, initially these took place at UK CMO meetings. Later in the pandemic, these discussions took place weekly at the UK Alert Level meeting, with an analysis of data from across all jurisdictions being provided by colleagues from the UKHSA. These discussions, and discussions at a range of other fora and groups detailed later in this statement, also greatly assisting in formulating advice and policy in relation to TTI.

59. The advice the CSA and I provided was based on the best available evidence at the time. It is a fact that the understanding of the virus, its transmission and the disease caused took time to emerge as did the scientific, public health and clinical research undertaken to provide an understanding of these aspects and to improve the information for policy decisions including the research required to improve treatment and to develop medical countermeasures. This is considered more fully in the UK CMO Technical report, Chapters 1, pages 21 to 62 and Chapter 3, pages 107 to 119 [MMcB7/021 - **INQ000203933**

60. The CMOs and CSAs had an essential role in prioritising science and supporting the direction and coordination of research from the outset. The priority given to science and research was reflected in the agreed initial Coronavirus Action Plan in March 2020 with the priorities being "contain, delay, research, mitigate". The extraordinary efforts of scientists, clinicians, and members of the public in NI and across the UK and

internationally who undertook and participated in clinical research, during a time when, clinicians were caring for significant numbers of severely ill patients, was remarkable. The international scientific and clinical cooperation and sharing of emerging findings ensured the early translation of this into policy, guidance and treatment across the public health response including in relation to TTI. As CMO, I along with the CSA, and other colleagues had full access to this. We considered the information, evidence, expert consensus recommendations and advice from a wide range of sources in formulating and providing professional advice to Ministers. This included consideration of the consensus views of SAGE and its subgroups, the Strategic Intelligence Group (SIG) in NI established by the CSA, recommendations from other international and European groups such as the World Health Organization (WHO) and the European Centre for Disease Control, emerging evidence presentations at the UK Senior Clinicians and consideration of numerous scientific papers and other papers.

61. The two DCMOs, the CSA, and Senior Medical Officers (SMOs) in my team, also reviewed emerging scientific, epidemiological and public health evidence on an ongoing basis as part of their roles in supporting me to formulate professional and policy advice in relation to TTI. Throughout the pandemic, and particularly in relation to the scope of Module 7, I worked very closely with the CSA, the DCMOs, other Professional Colleagues and policy staff both within CMOG, with staff in the COVD-19 Response Directorate, and across the Department where relevant to provide the best possible advice to the Health Minister and consequently to the NI Executive. While presenting this advice, I and other professional colleagues made clear the significant uncertainties and the limitations of the knowledge and evidence at the time.

62. While this advice was formed through engagement and discussion with the CSA and DCMOs, and policy teams and with due regards to a range of sources of information, I agreed the final form of the advice given to the Health Minister and the NI Executive reflecting my wider remit. Exceptions to this were when I was unavailable, for example, when absent on leave. Throughout the pandemic and particularly in the first four months, a collective team approach was adopted involving professional and policy colleagues across the Department and the wider HSC and its ALBs. This reflected the span of responsibilities of the Department and the complexity required to coordinate the various aspects of the response to the pandemic.

63. Throughout the duration of any emergency, I was expected to continue to discharge the roles and responsibilities as described above in so far as was possible. This is something which I and other professional colleagues did to the best of our ability throughout the period January 2020 to June 2022. Given the nature of the response required, the roles and responsibilities and those of CMOG changed and evolved as we assumed significant new and additional responsibilities for oversight of significant elements of the Covid-19 response including the policy areas being considered in Module 7.

64. Departmental advisors, including myself, CSA, deputies and respective policy teams, continued to provide information and advice to Ministers and the NI Executive when required. This advice role became even more important and substantial during the pandemic and was generally routed through the Private Office and/or agreed with the Health Minister.

65. Along with the CSA, I also attended pre-NI Executive meeting briefings with the First Minister (FM) and deputy First Minister (dFM) in support of the Health Minister, on an ad hoc basis in the first few months of the pandemic and then regularly when these became more routine later in 2020.

66. I regularly attended NI Executive meetings and was accompanied to most of these meetings by the CSA, or his Deputy (a post created during the pandemic), who gave presentations on the latest 'R' paper. The CSA and I then answered questions posed by NI Executive Ministers and provided additional information, when possible, to address their questions. This also included providing updates on the Covid-19 TTP Strategy programme.

67. I also supported the FM, dFM and the Health Minister at meetings of Cabinet Office Briefing Room (COBR) and in four nation meetings, and at meetings with counterparts in RoI.

68. Policy decisions in relation to the Covid-19 TTP Strategy were made by the Health Minister having considered policy and professional advice from me and my team.

There was strategic oversight of the test and contact tracing programmes by the Department and the details of this are described in more detail below.

Covid-19 Response Directorate

69. In response to the continuing work demands placed on the CMOG staff, a Covid-19 Response Directorate [MMcB7/354 – INQ000581897] was established in September 2020 within CMOG, with a Grade 5 Director as lead along with a team which grew incrementally, with numbers fluctuating. Many of this team were new to the NI Civil Service, the Department or had been recently promoted. This along with working from home made the integration and development of the team more challenging. This challenge was experienced and reflected across the Department as new teams were formed at pace to manage complex strategic policy priorities. The following year, in June 2021, a Covid-19 Strategy Directorate [MMcB7/355 – INQ000581898] was established. The primary role of the Covid-19 Response Directorate was to oversee policy in relation to Testing and Contact Tracing. The role of the Covid-19 Strategy Directorate was to oversee a range of new evolving responsibilities including Waste Water (WW) Surveillance, coordination of the relationship with the then soon to be established UKHSA; and support for the International Travel Programme; and a refresh of the Testing Strategy (the latter was not published as it was overtaken by events).

70. The Covid-19 Response Directorate oversaw policy in relation to Covid-19 testing and contact tracing. The remit of the Directorate was to provide policy direction and oversight for all aspects of the Covid-19 testing policy for NI; working together with the PHA, to act as the interface with the National Testing Programme led by the DHSC/ UKHSA; and, for the TTP Strategy which detailed the approach to contact tracing in NI. To inform policy options, the Directorate worked extremely closely with and secured inputs from senior professional colleagues (including myself, DCMOs and CSA), other Departmental policy officials where relevant, and a range of other key stakeholders and partners including principally the Department's EAG-T, the TTP Strategic Oversight Board, public health professionals from the PHA and policy counterparts across the UK.

Other relevant working groups

71. On behalf of the Department, I also established or approved the establishment of several other key NI groups relevant to the scope of Module 7 which also considered best available evidence and generated information and advice for the purposes of testing and contact tracing. However, I was not always able to attend the meetings of these groups due to other commitments and meetings, such were the demands on my time. However, the Department was a member of and attended all relevant meetings. These groups also considered evidence from many different sources around the world as well as evidence and information generated from within NI.

72. They included (further detail where relevant on each of these groups is set out later in this statement):

    i. The **Test, Trace, Isolate, Protect Strategic Oversight Board** [MMcB7/022 - INQ000137363] - This was established in May 2020. I chaired the Board, and its primary role was to provide strategic oversight of both the contact tracing and testing programmes, and to provide advice in terms of policy implementation and its effectiveness. Further detail is set out below.

    ii. **The Expert Advisory Group on Testing** (EAG-T) [MMcB7/023 - INQ000137354] - EAG-T was established at my request and was a Departmental Group led by an Associate Director within the PHA (now retired). The EAG-T was established to assist in developing the NI approach to Covid-19 testing; to oversee/coordinate implementation of testing, and to advise on updates to testing strategy and policy throughout the pandemic. This was a key advisory group in relation to all elements of Covid-19 testing policy and operational delivery in NI. A key function of this group was to advise on implementation of Covid-19 testing in NI and to provide expert advice which was then considered by Departmental policy leads to inform advice to myself and the Health Minister. The group also played a significant role in advising on and in coordination of delivery of the expansion of testing capacity. Membership of EAG-T comprised a range of colleagues from the PHA including public health consultants; virologists from the Belfast Health and Social Care Trust (BHSCT)

Regional Virus Laboratory; representation from HSC Trusts; HSC Laboratories Pathology Network (within SPPG); BSO procurement, and the Department's Director of COVID-19 Response and members of his team. Others from across the HSC system and beyond were co-opted or invited to attend meetings as relevant matters were discussed, for example the South Eastern Health and Social Care Trust (SEHSCT) Prison Healthcare Team attended on a number of occasions to discuss testing in prisons.

iii. **Testing in Care Homes – Task and Finish Group** [MMcB7/024 - INQ000455308] - This Departmental group was also established at my request on 8 May 2020 to provide direction and guidance to support the development and implementation of Covid-19 testing arrangements within care homes. It also more generally provided professional and technical advice on testing to social care policy leads within the Department, and included active participation from the PHA and RQIA and the Department's EAG-T.

iv. **NI SMART Programme Board** - With the agreement of the Health Minister, I established a separate NI SMART (Systematic, Meaningful, Asymptomatic, Repeated Testing) programme to oversee all aspects of the introduction of community testing using Lateral Flow Devices ('LFD'). The operational expansion of asymptomatic LFD testing in NI required the Department to work in close partnership with a broad range of local partners, including the DfC, local government, other public sector agencies, and a range of business sectors. The Department presented a paper on the expansion of asymptomatic testing to the NI Executive on 11 February 2021 [MMcB7/111 - **INQ000375891**]. The programme initially focused on coordinating and advising on availability of asymptomatic testing through workplace schemes. Its role also included oversight of population level LFD testing for example working with a range of stakeholders to coordinate making tests available to the general public in NI through a range of different access schemes which included the Home Channel, Pharmacy Collect and a range of local collect sites. This work was all undertaken under the auspices of contracts managed by the National Testing Programme. While not all members attended all meetings, the NI SMART Programme Board was chaired by myself and membership comprised: DCMO;

the NI SMART Programme Director (an externally appointed logistics, operations and delivery expert); a senior, external business sector advisor (former Chief Executive of Invest NI); PHA Director of Contact Tracing Service; the Chair of EAG; the Department's Director of COVID-19 Response; a senior Local Government Advisor; Departmental communications, and colleagues from Queens University Belfast (who were instrumental in establishing early LFD demonstrator sites in NI) [MMcB7/025 - INQ000137362].

There was direct engagement with and information sharing with local government in NI in respect of levels of community transmission and response measures to address – including the TTP Strategy. The CSA and I met with the CEOs of NI's eleven District Councils (local government councils) on a number of occasions. At times some of these meetings were specific to Councils with high community transmission, some of these were arranged by the Department, and others were coordinated by TEO and provided an opportunity to provide updates to Council CEOs. This close engagement and joint working relationship with local government was invaluable in the establishment of community testing with LFDs as part of the NI SMART programme referenced above.

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

vi. **The Nosocomial Support Cell (NSC)** - This was another group with a remit with respect to Covid-19 testing and support. During the autumn and winter of

2020, there were considerable pressures on the HSC system in NI, with HSC Trusts experiencing challenges, especially with regard to Hospital Associated Covid-19 Infections (HAIs). HAIs, or Nosocomial Infections, are infections that are acquired during the process of receiving health care that were not present during the time of admission. As infection rates increase, the impact of this can lead to:

1. prolonged hospital stays;
2. a higher number of staff absences due to self-isolation; and
3. an increased mortality rate, particularly among more vulnerable patients.

At that point, there were already measures in place across the HSC system to minimise transmission of Covid-19 in acute settings, including pre-admission testing, pre-admission quarantining prior to elective procedures, testing of healthcare workers, and reduced turnaround times for reporting of test results. Whilst these measures undoubtedly had a positive impact in mitigating transmission of the virus in hospitals, it was recognised that as we progressed into the winter months, hospitals would be under increased pressure with both Covid-19 and non-Covid-19 admissions. It was critical to know exactly what was happening across the system to enable all services and service providers to be proactive in pre-empting potential outbreaks and preventing the subsequent spread of Covid-19 in acute settings. In December 2020, I, on behalf of the Department, established a regional NSC as part of the Department's approach to supporting Trusts to address the challenges arising from Covid-19 in healthcare settings [MMcB7/026 - INQ000185385]. While the primary responsibility for prevention of HAIs and the management of any outbreaks of Covid-19 remained with HSC Trusts supported by the PHA, the objective of the NSC was to provide multidisciplinary support to the region, and to those HSC Trusts experiencing clusters or that had sustained complex outbreaks of healthcare associated Covid-19 infections in acute settings. The work programme for the NSC included – development and introduction of a regional nosocomial dashboard, completion of a programme of learning visits to acute hospitals with a focus on sharing learning, development of a region-wide

approach to reviewing and learning from deaths associated with hospital-acquired Covid-19.

vii. **The Department's Strategic Intelligence Group (SIG) –** This was a key source of advice and expertise to inform the NI response to the pandemic. It was established in or around 27 April 2020 and chaired by the CSA. The details of its terms of reference and membership are provided in [MMcB7/027 - INQ000103642] and [MMcB7/027a – INQ000183442]. SIG was to consider scientific and technical evidence emerging from SAGE and other sources alongside NI data on the trajectory of the pandemic, much of which also fed into NI modelling. The evidence considered and the analysis provided by SIG informed the advice that the CSA and I provided to the Health Minister and in turn to the NI Executive. This advice helped inform policy decisions by Ministers during the pandemic, particularly in respect of the potential health impacts of Covid-19 in NI and the approaches to mitigating these.

viii. **The NI Modelling Group** [MMcB7/028 - INQ000137356] - This was chaired by the CSA, Professor Ian Young, and was a Departmental group. I attended meetings of the group from January 2021 when the CSA was unavailable for a period. During this time the meetings were chaired by the Deputy CSA. I continued to attend after the return of the CSA. The role of the group was to undertake population level modelling work and to estimate the value of 'R' in NI. The group considered information and modelling generated from across the UK and within NI to inform their work and this was submitted to the NI Executive and published on the Department's website. As discussed later in this statement, the outputs of this modelling and in particular the projected number of cases was one strand of data considered by the PHA in TTI planning. While the Department did not undertake specific modelling for TTI, the CSA provided recommendations to the PHA on numbers of contact tracers required in 2020. Further information on any specific modelling carried out to support TTI should be sought from the PHA.

ix. **The NI Pathology Network** (hosted by the then HSCB, now SPPG within the Department) - A regional group was set-up to enable planning and coordination

of the expansion of Covid-19 testing in HSC Laboratories (often referred to as Pillar 1), working with and reporting progress to EAG-T. This group included leadership from a number of Network stakeholders, in particular the Microbiology & Virology and Point of Care Specialty Fora, commissioners, public health leads, BSO Information Technology Services (ITS) and BHSCT Lab IT leads who supported work on data and connectivity, and BSO Procurement and Logistics Service (PaLS) who provided input on contracting, procurement and logistics. In October 2020 I asked that the Pathology Network take the lead role in the coordination of the deployment of the new rapid Covid-19 testing technologies determined by the EAG-T to be appropriate for use in Pillar 1 in NI. The NI population-based share allocation from the DHSC procurements of these new Point of Care Testing technologies was distributed across all five local HSC Trusts from November 2020. Following successful pilots and verification, the technologies deployed were LumiraDx, LIAT and SAMBA II (further detail is set out later in the statement). The Pathology Network also worked with BHSCT, Queens University Belfast, the HSCB, PHA and the EAG-T to coordinate funding required for a whole genome sequencing (WGS) service in NI.

73. The Department's Population Health Directorate and its Health Protection and Emergency Planning Branches; the Health Emergency Planning Forum, and Local Commissioning Groups had no substantive role in decision making structures in relation to TTI policy or TTP Strategy.

The Role of HSC Trusts

74. HSC Trusts in NI had a lead role in implementing relevant guidance issued by the Department that falls within the scope of this module. This includes: the implementation of the routine testing of Healthcare Workers (HCWs); management of positive cases in HCWs including contact tracing within HSC Trusts; and adherence to guidance in relation to testing to support clinical pathways (set out in numerous iterations of the Department's *Interim Protocol on Testing*). The first version of the IPT was dated 19 March 2020 [MMcB7/055 - INQ000120705]. There were 10 IPTs issued in total during the Module 7 relevant period (further detail is set out later in this

statement). The HSC Trusts also had managerial responsibility and accountability for laboratory services within their organisations as commissioned by the HSCB.

Work with other Government Department and Agencies

75. The Department worked in partnership with a number of other NI Executive Ministers, their departments and agencies throughout the pandemic on a range of public health interventions relevant to the scope of Module 7. Relevant examples include [MMcB7/029 - INQ000381468], but are not limited to, working with the DE and the EA in relation to testing and contact tracing in schools and schools for children with special education needs; with DAERA in relation to Wastewater testing and prioritised asymptomatic LFD testing in the agri-food sector in February 2021; with DfI in relation to testing of hauliers in January 2021 [MMcB7/030 - INQ000381443]; with DfE in relation to testing of university students, and with DfC, which was responsible for providing the financial support required including through the Discretionary Support Scheme for those self-isolating, and who were represented on the TTP Strategy Oversight Board.

The Main Decision Makers in the Development and Implementation of TTI Policy

76. The main decision makers who were involved in the development and implementation of the TTP Strategy included:

i. <u>The Health Minister – Robin Swann (January 2020 – October 2022)</u>

Robin Swann served as Minister of Health for NI from 11 January 2020 until 27 October 2022.

In a ministerial role, a Minister will exercise the functions assigned to the Health Ministerial office that they hold and have full executive authority within any broad programme agreed to by the NI Executive and endorsed by the NI Assembly. A Minister is expected to act in accordance with the Northern Ireland Executive Ministerial Code [see MMcB7/011 - INQ000215120]. The functions of a department are at all times exercised subject to the Health 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. Under paragraph 2.4 of the Health Ministerial Code, ministers are required to bring matters deemed to be crosscutting, significant or controversial to the NI Executive.

ii. Special Adviser (SpAd) to Health Minister – Mark Ovens (January 2020 – October 2022)

Mark Ovens was appointed SpAd to the new Health Minister Robin Swann MLA on 11 January 2020 and held the role until 27 October 2022.

A SpAd is a political appointment made by the Health Minister and, in general, a SpAd works closely with civil servants to deliver the Health Minister's priorities. The SpAd is however not a civil servant. They assist the Health Minister on matters where the work of government and the Health Minister's party responsibilities overlap and where it would be inappropriate for civil servants to become involved. The SpAd is an additional resource for the Health 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 Health Ministers who have appointed them and the NI Executive as a whole. SpAds can, on behalf of their Minister, convey the Health 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.

iii. Permanent Secretary Department of Health – Richard Pengelly – (July 2014 – April 2022)

Richard Pengelly was Permanent Secretary in the then Department of Health, Social Services and Public Safety – renamed in 2016 as the Department of Health and

Chief Executive of Health and Social Care (HSC) - from 1 July 2014 until 4 April 2022 when he moved to the post of Permanent Secretary in the Department of Justice.

iv. Permanent Secretary Department of Health – Peter May – (April 2022 – present)

Peter May took up the post of Permanent Secretary for the Department of Health and Chief Executive of Health and Social Care (HSC) on 4 April 2022, and currently remains in post. Mr May previously held Permanent Secretary positions in the Department of Justice, Department for Infrastructure and the Department of Culture, Arts and Leisure.

The role of the Permanent Secretary is as Principal Adviser to the Health Minister and the Principal Accounting Officer for the Department, and HSC Chief Executive. Previous post holders and dates when they held office are detailed in [MMcB7/031 - INQ000183438].

SLT and the Departmental Board have responsibility for the overall corporate governance of the Department and ensuring that the Health Minister's policies and priorities are implemented in compliance with all statutory, regulatory and financial management requirements to which NI Executive departments adhere. Both the SLT and the Departmental Board are chaired by the Department's Permanent Secretary who is the Department's Accounting Officer. The Permanent Secretary is also the overall Chief Executive and Accounting Officer for the statutory-based health and social care bodies in NI reporting to the Health Minister.

v. Chief Medical Officer – Professor Sir Michael McBride – (September 2006 -present)

Unlike other UK CMOs, I do not have a separate office, and my role is integrated into the Department. The CMO role has been described above starting at paragraph 50.

vi. Chief Scientific Advisor – Professor Ian Young - (Part time role November 2015 - present, with a Full time period March 2020 - early 2022)

Professor Ian Young was appointed to the post of CSA to the Department in November 2015. Reporting to myself as CMO, the CSA provides scientific advice

and analysis to CMO and to the Health Minister across a range of public health and social care issues. The CSA also worked 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. During the pandemic emergency, the CSA worked closely with myself and other Departmental officials to provide scientific, technical and medical advice to the Health Minister, which also can form part of the Health Minister's advice to the NI Executive, to inform its decisions.

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

During the pandemic and the period in the scope of Module 7, the NI Executive did not have a general CSA, meaning a CSA unattached to any specific government department or policy brief. There were two Departmental CSAs in NI – one in the Department of Health 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.

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. In June 2024, TEO announced the appointment of a NI Executive Chief Scientific and Technology Adviser. Responsibilities of the role are to coordinate a regional strategy to put science and technology at the heart of policy development; to chair a newly formed NI Science & Technology Advisory Network; and represent NI's economic policy development on a national and international stage. Further details to assist the Inquiry if required may be best provided by TEO.

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") [MMcB7/032 - 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).

vii. <u>Deputy Chief Medical Officer – Professor Lourda Geoghegan – (June 2020 – present)</u>

Professor Lourda Geoghegan was appointed to the post of DCMO Safety and Quality in June 2020, having been seconded to the Department from the RQIA from March 2020 to May 2020 to support the Covid-19 response. Professor 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).

Reporting to myself as CMO, Professor 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. Professor Geoghegan 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 HSC Trusts with healthcare associated outbreaks of Covid-19 and providing professional and technical health protection advice with respect to testing and contact tracing.

viii. Deputy Chief Medical Officer – Dr Naresh Chada (April 2019 – present)

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 Chemical, Biological, Radiological and Nuclear (CBRN) emergency. Reporting to myself as CMO, 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.

Professor Geoghegan and Dr Chada 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. This continued throughout the pandemic response in respect of all professional and technical aspects of TTI, the TTP Strategy and revisions to the Covid-19 Testing Strategy.

ix. Director of COVID-19 Response Directorate (Test & Trace) - Kieran McAteer (October 2020 - December 2022)

The Director of the COVID-19 Response Directorate formally took up post on 1 October 2020 within CMOG. Mr McAteer had been temporarily promoted into the role effective from 8 September 2020 to lead creation of the new Directorate.

The Director had delegated policy responsibility for Covid-19 Testing and Contact Tracing and reported directly to Professor Lourda Geoghegan, DCMO in this policy remit. To inform policy options and advice, the Director worked closely with and secured appropriate inputs from a range of colleagues including in particular senior professional colleagues including myself as CMO, DCMOs and CSA and the Associate Deputy CMO when appointed.

x. Dr Joanne McClean, Associate DCMO (1 June 2021 to 31 August 2022)

Dr Joanne McClean was seconded from the PHA to the Department on 1 June 2021 as an Associate Deputy CMO and stayed in that role until returning to the PHA on 1 September 2022. A key part of Dr McClean's Departmental role was to provide professional and technical health protection advice with respect to testing and contact tracing, including in schools. Dr McClean mainly supported the Director of the COVID-19 Response Directorate with the ongoing review and updating of guidance in relation to testing, contact tracing and self-isolation especially with respect to schools working closely with the Department of Education and the Education Authority in NI, and in relation to the Department's Test and Trace Transition Plan (March 2022) [MMcB7/059 - INQ000348966].

Testing - National Testing Programme MoU and Testing at Borders

77. Testing was a critical part of the NI pandemic response. The Department was responsible for setting all strategic policy in relation to testing for Covid-19. In addition to setting policy, the Department worked with the EAG-T and the PHA to develop advice and guidance in relation to testing at a wider population level. This also covered policy advice in relation to a wide range of sectors including but not limited to:

policy in relation to testing in care homes and other adult social care settings; testing to support clinical pathways in HSC Trust services; testing in schools, schools for children with special educational needs and higher education settings; workplace testing; and testing to support key workers including healthcare workers. Further detail is explained later in the statement.

78. Laboratory PCR testing for Covid-19 in NI was delivered through two routes. Firstly, through the existing NI Health and Social Care laboratory network. This was often referred to as *Pillar 1* testing. Secondly, NI participated in the National Testing Programme (often referred to as *Pillar 2*) which was managed on a UK wide basis by the Department of Health and Social Care (DHSC), and latterly from its establishment in October 2021 by the UKHSA. Further detail on both is explained later in this statement.

79. Delivery of the National Testing Programme in NI was underpinned by a Memorandum of Understanding (MoU) [MMcB7/033 - INQ000467330] between the Department and the Secretary of State for Health acting through the DHSC. The Department understands that each Devolved Administration Health Minister signed the same MoU with only minor adjustments to take account of local issues where relevant.

80. Under the terms of the National Testing Programme MoU, UKHSA was able to enter into contracts to secure the provision of equipment, goods or services for the NI Health Service; in a case where the Department requested this and agreed to reimburse UKHSA for same. As such, NI benefitted from a wide range of contracts put in place and managed by UKHSA under the MoU. Further details, including in relation to supporting funding arrangements, are set out in later in the statement.

81. Operational delivery of the National Testing Programme in NI was managed under contracts procured, established and maintained by DHSC/ UKHSA. The PHA worked closely with DHSC/ UKHSA, and with the local service provider who operated the test sites, to manage and oversee operational delivery.

82. The Department's policy development in relation to border health measures including testing, was underpinned by International Travel Regulations, and continued to be

guided by information on the risks associated with international travel, provided from UK Government national analysis. The Department, in agreement with the NI Executive, established policy in relation to testing, tracing and isolation to support International Travel and guidance on Travel within the Common Travel Area.

83. Following the review of evidential material and regular consultation and discussions on a UK four nations basis, the Department submitted aspects of border health policy related to the International Travel Regulations to the NI Executive for decision and agreement. For example, the Department asked for the NI Executive's agreement on the need for International Travel Regulations to be created, reviewed and maintained; an agreement to implement a system of pre-departure and post-arrival testing for all international arrivals to NI; the need for the completion of a passenger locator form; and the enforcement of these measures. There was also a requirement for testing and / or self-isolation for people entering NI, and this too was a matter which the Department referred to the NI Executive for consideration, agreement and approval.

Contact Tracing

84. In NI and across the UK, a key part of the pandemic response included the tracing of contacts of Covid-19 cases and the timely provision of self-isolation and other public health advice to them and their close contacts to interrupt chains of infection and to reduce community transmission. The Department was responsible for setting all strategic policy in relation to Contact Tracing for Covid-19.

85. In the early 'contain' phase of the pandemic (January to March 2020), there were relatively small numbers of cases and the aim of contact tracing was to identify and manage all cases and contacts using existing structures and capacity available at that stage as part of its normal line of business within the PHA's Health Protection service, which had established expertise in risk assessment of incidents and outbreaks, and in undertaking contact tracing as a core aspect of its usual Health Protection function.

86. As in the rest of the UK, the PHA was undertaking contact tracing for all cases of Covid-19 until 12 March 2020, when contact tracing was paused in line with a decision which was taken by the Cabinet Office Briefing Room Ministerial Meeting (COBR (M)).

Contact tracing in NI remained paused until it was reintroduced by the PHA on 27 April 2020, initially through a pilot phase with the full launch on 18 May 2020. In the intervening period from 12 March 2020, contact tracing continued in health and social care settings including care homes.

87. On 1 May 2020 I established a Contact Tracing Steering Group to oversee the establishment of the Contact Tracing Service in NI and to provide strategic direction for its operation. The Steering Group reported to the Department. Dr Elizabeth Mitchell (former DCMO) and Mr Alistair Finlay (Queens University Belfast) were appointed by the Department as joint Chairs of the Steering Group. The Steering Group was subsequently stood down at the end of September 2020 when operational responsibility for the Contact Tracing Service in its entirety and associated governance and accountability arrangements again transitioned to the PHA as part of their normal line of business. The PHA continued to report progress on the operation and performance of the Contact Tracing Service through the PHA Chief Executive and to the Department's TTP Oversight Board.

88. Although operational responsibility for the Contact Tracing Service was managed by the PHA, the Department retained control of all strategic policy matters in relation to contact tracing throughout the pandemic. Further detail on the Contact Tracing Service including its role, performance and operating model is described later in this statement.

Isolation

89. The Department was responsible for setting strategic policy in NI in relation to the isolation of those with symptoms, suspected cases, positive cases and close contacts. In addition to setting policy in relation to isolation at a wider, population level, the Department also set policy for example in relation to isolation requirements for health and care workers. As noted above, isolation requirements in relation to international travel and travel from within the Common Travel Area were agreed together with the NI Executive. The Department's policy position in relation to isolation requirements was kept under continuous review and was informed by a wide range of advice and

expertise, including the PHA and a number of key UK-wide scientific and clinical groups.

90. While the Department did not have a lead role in enforcing or ensuring compliance with isolation requirements, it did promote the importance of compliance with isolation requirements both through its own ongoing communications and as part of an integrated cross Departmental communications approach, including under the auspices of the NI Executive's COVID-19 Taskforce which formed in February 2021 [MMcB7/034 - INQ000348965]. DfC had a lead role in providing the support that was needed for those that were self-isolating, including the provision of financial support through DfC's Discretionary Support Scheme. The Department worked closely with DfC colleagues under the auspices of the TTP Oversight Board.

Strategic Coordination of Testing and Contact Tracing

91. The Health Minister set the overall course of the programme and approved major policy decisions, and as Chair of the TTP Strategic Oversight Board, I had sight of and steered strategic delivery of the programme. While the scale up in contact tracing and testing was unprecedented and a remarkable achievement by all concerned, it did take time due to significant logistical and operational challenges.

92. CMOG played a significant role in overseeing, at a strategic level, the planning and delivery of the Covid-19 TTP Strategy in NI [MMcB7/035 - INQ000120704]. Throughout the course of the programme, I provided regular updates directly to the Health Minister and also to the NI Executive as was required.

93. The testing and contact tracing programmes were key strategic elements of the pandemic response in interrupting transmission and reducing community transmission. These interdependent programmes of Covid-19 testing and contact tracing required strategic coordination. Both programmes were complex and there were significant logistical and operational challenges which overlapped with policy dimensions in both.

Test, Trace, Isolate, Protect Strategic Oversight Board

94. As previously described, recognising the strategic importance and interdependencies the Department established the "Test, Trace, Isolate, Protect Strategic Oversight Board" [see MMcB7/022 - INQ000137363] from May 2020, which I chaired. The Board's role was to provide oversight of both the contact tracing and testing programmes. This included the sharing of intelligence on clusters and outbreaks (provided by PHA based on its information and surveillance systems) and providing advice in terms of policy implementation and its effectiveness.

95. Membership of the Oversight Board included the two Departmental DCMOs; the then PHA Chief Executive; PHA Director and Deputy Director of Contact Tracing Service; the Chair of EAG-T; PHA Assistant Director of Communications; Departmental Solicitors office; the Department's Information Governance Lead; the Department's Digital Health & Care Directorate, and policy staff from the COVID-19 Response Directorate. Later in April 2022 the Board's Terms of Reference were updated to oversee implementation of the Covid-19 Test, Trace and Protect Transition Plan [MMcB7/036 - INQ000137364]. Given the collaborative approach between the PHA and the Department in relation to delivery of the test and trace programmes, the Board ensured an effective and efficient interface between policy and PHA-led operational teams as the approaches to testing and contact tracing continued to rapidly evolve throughout the pandemic. The establishment of the Board also ensured that the Department was able to provide assurances and regular updates to the Health Minister and the NI Executive on the effectiveness of both the testing and contact tracing programmes.

Overview of Engagement with Voluntary, Community and Social Enterprise Groups

96. Due to the emergency and fast evolving nature of the pandemic response, the Department acknowledges that it was not in a position to engage with voluntary, community and social enterprise groups to the extent, depth and composite nature that it would ordinarily strive to achieve in policy development and delivery.

97. Notwithstanding this, the Department and its partners did seek to prioritise such engagement and involvement, and to utilise wider networks and links, in the development and evolution of the TTP programme and operational delivery elements as best it could given the extreme circumstances. Examples include but are not limited to:

i. Through the NI SMART work to expand the use of LFDs, the Department worked with local government and third sector organisations to expand the availability of community Assisted Testing Sites and community Collect Sites at a wide range of locations across the region including some to serve more rural communities. Ten out of the eleven Local Councils established collection sites, with a total of 39 collect sites available for both staff, the public and wider community groups including those supporting vulnerable and marginalised groups.

ii. The Department worked closely with DfC colleagues under auspices of the TTP Strategic Oversight Board. As previously advised, DfC had a lead role in providing the support that was needed for those who were self-isolating, including the provision of financial support through DfC's Discretionary Support Scheme. The Department also worked closely with the DfC from early May 2020 until 31 July 2020 to put arrangements in place for priority access to online grocery shopping slots for those who were Clinically Extremely Vulnerable. The Department worked with DfC to ensure that those who were unable to access food through online shopping, family, friends or local support networks including those who were shielding were able to avail of food box deliveries. These programmes relied upon and utilised the wide network of relations, including with community and voluntary groups, that DfC had established and maintained.

iii. Along with the DCMO and policy colleagues, I engaged with the Commissioner for Older People Northern Ireland (COPNI) and other stakeholders on relevant matters associated with Covid-19 testing in Care Homes. This engagement included a range of online meetings and written communications. By way of example, on 28 July 2020, I held an online meeting with stakeholders including COPNI, Age NI, and Independent Health and Care Providers (IHCP) about the introduction of the planned regular programme of Covid-19 testing for all residents

and staff in Care Homes which subsequently commenced on 3 August 2020. Following this meeting, I issued written correspondence on this subject to the same set of stakeholders on 29 July 2020. This correspondence included the email address of a CMO Group policy official as a point of contact should there be any questions about the regular programme of testing in Care Homes. Further, on 5 November 2020 along with the DCMO, I held an online meeting with stakeholders about the move to weekly testing for Care Home staff. The meeting invitation was extended to COPNI, Age NI, IHCP (representing those providing services to older people and vulnerable adults), Association for Real Change (ARC), PHA and DoH policy and professional colleagues. The Health Minister also met with a wide range of stakeholders throughout the pandemic response which included discussion in relation to TTP policy matters.

iv. A Task & Finish Group was established (chaired by the Chair of EAG-T who was an Associate Director with the PHA) to support the rollout of staff testing across a wide range of supported living services across a number of programmes of care including for homeless service users. The Task & Finish Group including a range of stakeholders including DfC and the NI Housing Executive who had a wide network of established links with community and voluntary and inclusion groups.

v. Whilst not work undertaken by the Department, the PHA undertook significant direct engagement with Vulnerable Groups and the BAME population on Covid-19 matters throughout the pandemic. For example, the PHA undertook a wide-ranging programme of engagement with stakeholders during the Contact Tracing Service development stage including with political parties; the Human Rights Commissioner for NI; the Equality Commission; the Children/Young People Commissioner; COPNI; and representatives from potentially hard-to-reach groups including the homeless population and the Roma community.

vi. The PHA also developed its Contact Tracing Vulnerable Groups Action Plan [MMcB7/037 - INQ000375903] to assist in its approach to engagement with hard-to-reach groups. The Action Plan was shared with the NI Executive on 2 September 2020 [MMcB7/038 - INQ000375902]. The Action Plan included a range of actions which utilised the PHA's wide network of links with community

and voluntary groups, whose staff at times attended mobile testing sites to support testing of people from various ethnic backgrounds. These groups also supported PHA-led Outbreak Incident Management Teams through follow up communication with target groups, and links were established with a wide range of community and voluntary sector groups to share messaging and communication, including in a range of languages. The Action Plan recognised the increased risks for specific vulnerable groups within the NI population as well as a need to put measures in place including pro-active support to optimise testing, tracing and compliance with Covid-19 Guidelines; and also recognised the importance of effective communications to support test and trace. The Action Plan included a focus to support the development of an Equality Impact Assessment for contact tracing; on testing of vulnerable groups during an outbreak; on communications, and to explore the use and promotion of the new Covid-19 app for vulnerable groups. The Action Plan built on the wide network of established links that the PHA had with community and voluntary groups.

vii. Further, whilst again this was work led by the PHA, following a series of outbreaks in the Mid-Ulster and Craigavon areas linked to the meat processing plants/ agri-food sector, I recall the PHA led a considerable and focused programme of enhanced measures including enhanced testing which targeted support for large cohorts of the workforce who were from ethnic minority backgrounds. The programme also had a dedicated approach to testing in houses of multiple occupancy and focused on enhanced and targeted communications. This programme involved partnership working with community groups.

System Readiness

Pre-pandemic Readiness Co-ordination with Other Bodies across the UK and within NI

98. The Department is aware that pre-pandemic planning and preparedness has been considered in detail in Module 1 of the Inquiry, with recommendations published by the Inquiry on 18 July 2024. The Department has not, therefore, sought to repeat the detail of information previously provided in statements to Module 1 [MMcB7/046 - INQ000187306, MMcB7/047 - INQ000203352 and MMcB7/048 - INQ000215123]. The Department has sought to highlight the aspects of pre-pandemic planning and preparedness with relevance to infrastructure and laboratory systems and with respect to surveillance, case finding, testing, contact tracing and data collection within the Scope of Module 7.

99. While testing, contact tracing and isolation have always been core elements of routine (usual) health protection service delivery and of pandemic preparedness and planning, the scale and duration at which these capabilities were required was unprecedented. This is a key learning point from this pandemic. As such, notwithstanding the limitations of contact tracing when community transmission is high, and when a highly transmissible new virus was spreading rapidly across the world, preparation and planning prior to the pandemic included an important focus on the principles of flexibility and proportionality. The Department is of the view that PHA preparation and planning for proportionate, scalable arrangements to maintain, develop and test epidemiological and laboratory pandemic reporting and collection systems building on their normal business as usual functions to increase further the capacity to deal with the requirements of a pandemic were reasonable. However, notwithstanding the effectiveness of contact tracing when community transmission is high, these plans had not fully anticipated the scale of contact tracing needed in the Covid-19 pandemic which, again, was unprecedented. This is covered more fully in the CMO Technical Report, Chapter 7, pages 213 – 232 [see MMcB7/021 - INQ000177534].

100. The UK Influenza Pandemic Preparedness Strategy 2011 [MMcB7/351 - INQ000188766] provided proposals for a coordinated, UK-wide strategic approach to

planning for, and responding to, the demands of an influenza pandemic. The 2013 Northern Ireland Health and Social Care Influenza Pandemic Preparedness and Response Guidance is closely linked to the 2011 Strategy and was developed by the Department to support preparedness and response planning for HSC organisations in an emergency response to an influenza pandemic.

101. Both the 2011 Strategy and 2013 Guidance outline the pre-pandemic planning and preparation actions required by HSC organisations to respond to the capacity and capability challenges of pandemic scenarios, including the detection and assessment phases. During these initial phases, the main requirement of the Strategy and Guidance was to identify the virus and to gain an understanding of its clinical, epidemiological and virological characteristics such as high-risk groups for severe disease and transmissibility. Maintaining surveillance and reducing the risk of transmission and infection would be key aspects of any response.

102. The 2011 Strategy makes it clear that key healthcare delivery in a pandemic includes the detection and diagnosis of early cases through testing and contact tracing. Under the initial "DETECT" phase of the Strategy, this would mean enhanced surveillance and the development of diagnostic tests specific to the new virus. Under the "EVALUATE" phase, the focus would be on actively finding cases and the self-isolation of cases and suspected cases. The 2011 Strategy and 2013 Guidance stated that, as for any infectious disease outbreak, rapid and more intensive data collection and analysis would be essential from the outset and, dependent on the virus, could be scaled accordingly to ensure appropriate and proportionate data collection, sharing and reporting. The Strategy also made clear that the gathering of this data was the collective responsibility of the public health services of the four UK countries, building on the lessons of the 2009 H1NI pandemic.

103. The 2013 Guidance sets out that HSC Trusts and the PHA were responsible for gathering data to monitor the virus in NI, albeit at different levels of intensity. It also made clear that the collection and analysis of health data that has a potential to significantly impact on public health would help to drive decisions on health policy. The Guidance sets out requirements for the PHA to:

i. maintain, develop and test epidemiological and laboratory pandemic reporting and collection systems;
ii. maintain communication planning; and
iii. ensure up to date generic guidance on the investigation and the management of cases is available.

104. It also provides guidance on the detection and assessment phases, including enhanced clinical surveillance, the development of diagnostic tests, swab testing by GPs and testing in hospitals of suspected cases. Furthermore, the Guidance also sets out the detailed surveillance arrangements needed for pandemic influenza and assessment of close contacts and testing arrangements.

105. Drawing from the 2011 Strategy, each HSC organisation was required to have plans in place for an influenza pandemic to provide:

i. a clear definition of roles and responsibilities;
ii. reporting and collation of surveillance requirements;
iii. swabbing and testing of samples and the issue of antiviral medication before Antiviral Collection Points (ACP) have been set up;
iv. surge plans for primary, secondary, and critical care;
v. plans for the implementation of the National Pandemic Flu Service;
vi. plans for the implementation of a Pandemic Specific Vaccination (PSV) programme; and
vii. plans for recovery and the return to business as usual.

106. Both the UK Strategy and the HSC Guidance outline the "reasonable worst case" planning assumptions and three main principles that must underpin pandemic planning and response, which are:

i. Precautionary - plan for an initial response that reflects the level of risk, based on information available at the time, accepting the uncertainty that will initially exist about the scale, severity, or level of impact of the virus;

ii. Proportionality - plan to be able to scale up and down in response to the emerging epidemiological, clinical, and virological characteristics of the virus and its impact at the time; and

iii. Flexibility - plan for the capacity to adapt to NI circumstances that may be different from the overall UK picture - for instance in hotspot areas.

107. More information on the HSC's ability to scale up in response to an emerging virus is provided at paragraphs 121 - 128 below.

108. The HSC joint response arrangements are detailed in their Joint Response Emergency Plan [see MMcB7/016 - INQ000188753] and other Critical Care and Acute Escalation Plans. In addition, all HSC organisations are required to maintain and review Business Continuity Plans for maintaining services and escalation systems to manage infectious disease outbreaks.

109. In December 2015, PHA, HSCB and BSO published the Joint Response Pandemic Operational Plan [MMcB7/049 - **INQ000102855** This plan set out how HSC organisations' joint operational processes would be activated during an influenza pandemic, based on the learning from the 2009 pandemic and on the principles of the 2013 HSC Guidance. The Joint Response (PHA/HSCB/BSO) Pandemic Operational Plan sets out the level of command and control to be activated as part of a joint response to a pandemic and is designed so that HSC can put enhanced services in place quickly, where necessary, and manage additional resources and appropriately trained professionals.

110. As per the reporting arrangements of the Controls Assurance Standards (CAS), the former HSCB, in conjunction with the PHA, submitted a joint Controls Assurance response to the Department's Emergency Planning Branch on an annual basis. BSO submitted their own return, due to the specific business functions they have within an emergency response. The Controls Assurance Standards process was in place from 1 April 2002 - 31 March 2018. In June 2018 the Department, in consultation with HSC Trusts and ALBs, introduced a new 'Core Standards for Emergency Planning' framework to bring NI into line with the rest of the UK. As part of these new arrangements, a duty to maintain emergency plans and business continuity plans was

placed on the Trusts and ALBs, who were required to provide an annual self-assessed report, based on the Core Standards published by the Department, to provide assurance that appropriate emergency preparedness measures were in place. It was specified in the Core Standards that these must include plans which are 'flexible, allow for the unexpected and can be scaled up or down'. It was also noted that, as part of this process, HSCB and PHA have a clear role to provide assurance to the Department that Trusts have comprehensive, robust and flexible plans in place to address any major incident or emergency situation, and that these plans are regularly reviewed, tested and validated. The joint PHA/HSCB/BSO Annual Report on emergency preparedness and response provides a mechanism through which the required assurances can be provided and any shortcomings highlighted.

111. Following the UK wide pandemic influenza exercise, Exercise Cygnus, in 2016, the cross-government Pandemic Flu Readiness Board (PFRB) was established to oversee a UK wide programme to deliver plans and capabilities to manage the wider consequences of pandemic influenza. Both the 2011 Strategy and the 2013 Guidance were under review as part of this programme.

112. In March 2018, the Department, in collaboration with the Department of Justice and TEO, formally established a CCGNI pandemic flu Northern Ireland sub-group as part of the UK-wide PFRB. The sub-group was chaired by the Department's Director of Population Health, and its aim was to provide oversight for a programme of work to deliver the plans and capabilities to manage the health and wider consequences of pandemic flu in NI. The group sought to work collaboratively with NI and UK partners, to oversee the delivery of work aimed at improving NI's resilience in the key areas set out in the PFRB programme.

113. Also in 2018, to take forward PFRB work on pandemic preparedness and response capabilities specifically in relation to health and social care, the Department established an NI Pandemic Flu Oversight Group (NIPFOG). The group was chaired by the Director of Population Health and membership included policy leads from across the Department, PHA and the then HSCB.

114. In 2019, much of the work of the PFRB programme was paused as resources were diverted to enable preparations for EU Exit. Work has since recommenced under the UK Pandemic Disease Capabilities Board.

Infrastructure and Laboratory Systems

115. In NI, Health and Social Care (HSC) Pathology Services were managed and provided prior to the pandemic across ten laboratory sites on a 24/7 basis by the five HSC Trusts and the Northern Ireland Blood Transfusion Service (NIBTS), covering a wide range of clinical and scientific disciplines. This remains the overarching management structure and configuration of services today, however a journey of modernisation and transformation was commenced in 2007 when the Department commissioned a comprehensive review of pathology services to consider and to make recommendations to help address the challenges of maintaining service standards in the context of growing demand, workforce pressures, evolving technology and services configured across multiple management structures and information systems.

116. HSC Pathology services were therefore responsible, prior to the pandemic, through these provider organisations for a range of functions provided by 19 different pathology disciplines within laboratory services, and the provision of direct patient care, as well as the supporting infrastructure which enables services to function (including laboratory estate, equipment, workforce, information management systems and sample transportation). These functions include the analysis of blood, tissue and other samples collected from patients; production of reports and clinical advice to inform diagnosis; monitoring the effectiveness of treatment; assessment of the likely future course of disease and the patient's prospects for recovery; and testing for bacteria or viruses for direct patient care and public health purposes. In addition, NIBTS is responsible for the collection of blood that is voluntarily donated by the public, and its preparation and supply for use in hospitals, as well as a range of specialist regional tests.

117. Regional coordination and collaboration of HSC Pathology Services has been provided by the Northern Ireland Pathology Network since it was established in 2009 as a regional, HSC-led advisory group comprising management, clinical and scientific

representatives from all relevant HSC bodies, pathology disciplines, academia, and professional bodies and reporting to the HSCB. The Pathology Network plays a vital and effective role in promoting consensus and consistency in the planning and delivery of HSC Pathology services and providing advice on the best way to commission these services.

118. The strategic direction for these services continues to be set and overseen by the Department, however the pace and extent of transformation have been impacted by external factors including budgetary constraints, the absence of Ministers in NI and by the onset of the pandemic. The Department's current 10-year strategy for Health and Social Care – Delivering Together (2016-26) [MMcB7/353 - INQ000185457] -identified pathology services as a priority area for further review, and a public consultation was subsequently conducted (Nov 2016-Feb 2017) on proposals to improve the digital infrastructure through a single regional laboratory information system, and to reform the regional management structure for HSC Pathology Services.

119. Following the restoration of the NI Assembly in 2020 after a three-year suspension, and while the response to the pandemic was ongoing, a Ministerial policy statement was issued in November 2021 which responded to the previous consultation and set out the Department's vision for modern, world class pathology services through a single, regional management structure which meets current and future quality and regulatory requirements, is supported by modern information systems and infrastructure, responds to changes in demand through effectively managing regional capacity, supports wider HSC clinical services through new models of clinical care and new targeted treatments, and adopts new ways of working and innovative technologies. In line with this strategic direction, the Northern Ireland Pathology Information Management System (NIPIMS) programme is currently in the process of being rolled out across all HSC Trusts and NIBTS, and the HSC Pathology Blueprint Programme is in the final stages of developing the design of a consolidated regional management structure for the management and delivery of HSC pathology services. As CMO, I chair the HSC Pathology Blueprint Programme Board as the Senior Responsible Officer (SRO).

120. Prior to the Covid-19 pandemic, each of the five HSC Trusts in NI had its own hospital laboratories (including microbiology and serology capacity). There is also a Regional Virology Laboratory (RVL) and regional services for genetic testing (including pathogen testing for public health purposes) which is based in Belfast HSC Trust. In January 2020, the baseline PCR capacity was 40 tests per day at the RVL. The RVL is a WHO influenza testing site and provides respiratory virus (and respiratory bacterial and fungal) testing for the region. The ability to provide diagnostics to newly emerging and pandemic potential viruses remains an important component of this RVL service. 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.

121. Local laboratories including the RVL can be scaled up in the event of a need for increased laboratory testing. There is additional capacity in Queen's University Belfast and in the Agri-Food and Biosciences Institute (AFBI – a Veterinary Service Laboratory), both of which were utilised during the Covid-19 response. In addition, there is significant private sector capacity (principally in Randox and in Almac, both private companies) which could be utilised to increase testing capacity in the event of public laboratory capacity being insufficient. 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 prioritised for use, particularly in the first wave. Almac was contracted as part of the Department's Scientific Advisory Consortium to provide additional capacity during the pandemic (see further details at paragraph 124). The Department did not contract with the Randox laboratory however the laboratory was contracted by DHSC/ UKHSA as part of the UK National Testing Programme to provide significant PCR testing capacity throughout the pandemic, including for NI.

122. Within a few weeks of the virus being identified, because of the sharing of the genotype by scientists in China with other scientists, the RVL in NI (along with only a handful of centres across the UK) had the ability to test for the virus, with the RVL commencing testing for Covid-19 on 7 February 2020 [see MMcB7/341-INQ000535730 at page 42]. The first Covid-19 positive case was confirmed in NI on 1 March 2020. This followed a presumptive positive test on 27 February 2020 at RVL (a

presumptive test is a positive test result obtained in the local HSC laboratory which was presumed positive pending official confirmation by a PHE laboratory).

123. In the early weeks following confirmation of the first positive case, when NI had a very small number of imported cases to test, existing PCR capacity in the HSC NI laboratory network was sufficient for diagnostic purposes in meeting early clinical need and epidemiological case definition in the community (i.e. confirmation of a suspected case in someone living in NI through a positive PCR test), and to support intensive contact tracing on the small number of imported cases. Established systems in place at that time, including to enable sharing of data regarding test results between RVL and PHA to inform public health actions, were sufficient while case numbers were at a low level. However, very quickly, as demand for testing and case numbers rapidly increased, it became clear that existing capacity and supporting systems and infrastructure were insufficient The PHA will be able to provide the Inquiry with further detail if this would be helpful.

124. During the early part of the pandemic, there was a need to rapidly scale up Covid-19 testing capacity within the HSC and the wider NI laboratory infrastructure. Partnership working through the NI Pathology Network, the Regional Virus Laboratory, including QUB, Agri-Food and Biosciences Institute (AFBI) and The Almac Group as part of the Scientific Consortium, which I asked to be established in March 2020, allowed NI to maximise existing testing capabilities using a variety of testing platforms and to standardise testing arrangements. While this expansion was eventually achieved, testing capacity was initially a significant rate limiting factor in the pandemic response as the demand for tests was unable to be met in line with emerging need of test and trace policy expansion. While tests for Covid-19 were developed rapidly, global supply chain challenges in relation to reagents and other consumables also limited the pace of scaling up testing capacity in NI and across the UK. Challenges in scaling up regional capacity across organisational boundaries were, in large part, addressed through the highly effective collaboration facilitated by the Northern Ireland Pathology Network working closely with the EAG-T. This included developing regional plans for the necessary expansion in HSC laboratory infrastructure and workforce required in NI during the pandemic, including in the RVL, through non-recurrent Covid-19 funding. In due course, access to the significant additional laboratory infrastructure and testing

capacity that was delivered through the UK National Testing Programme (NTP) greatly enhanced available NI capacity. This is covered in more detail later in this statement. All of these factors combined to significantly limit the ability to respond and scale up testing capacity, and the effectiveness of the Test Trace Protect strategy (which underpinned test, trace, isolate policy in NI) and 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. In these circumstances, testing capacity was prioritised and focused on those people needing clinical care, those in vulnerable settings such as hospitals, outbreaks in care homes, and key workers. Further detail on prioritisation of testing capacity is set out later in this statement.

125. The magnitude and speed of the scale up required in laboratory infrastructure and Covid-19 testing capacity was unprecedented and highlighted the critical importance of maintaining knowledge, capability and contingency arrangements to rapidly surge laboratory diagnostic infrastructure and testing capacity as part of future pandemic planning. In NI, while the Pathology Network provided an effective vehicle for facilitating regional collaboration, knowledge sharing and support to increase capacity, the extant delivery model for laboratory services (i.e. across five Trusts and the NIBTS) arguably added an element of complexity to the response. The Pathology Blueprint Programme, established in April 2022 will lead to significant further opportunities to standardise and address some of the logistical challenges encountered during the pandemic as it aims to establisha single management structure for all HSC pathology services. The Blueprint Programme has completed an Options Appraisal process to determine the preferred organisational structure for HSC pathology services: *"A HSC Special Agency that delivers all HSC pathology services, the NIBTS as well as the functions of the Northern Ireland Pathology Network."* Phase 1 of the Blueprint Programme was completed in December 2024 with the submission to the Department of an Outline Business Case and draft design for this preferred option, which are currently being considered under the Department's business case review process. Progressing the Programme remains subject to approval and affordability considerations. More detailed background about the Pathology Blueprint Programme is set out in [MMcB7/356 – INQ000581899]. Many of the challenges in scaling up laboratory infrastructure and Covid-19 testing capacity were consistent across the UK and the approaches are considered further in the UK CMO Technical report on the

Covid-19 pandemic in the UK (Chapter 6, pages 185 - 211) [see MMcB7/021 - INQ000177534], to which I contributed.

126. Contact tracing is a recognised and well-established public health activity used to identify and break chains of transmission to help reduce the spread of infectious diseases as an integral part of the response to the outbreak of an infectious disease and is managed and led operationally by the PHA in NI. It has been used for many decades in the response to infectious disease outbreaks and epidemics, usually alongside other public health activities and control measures. Similar to the level of baseline PCR testing capacity, in the early 'contain' phase of the pandemic, when there were relatively small numbers of cases and the aim of contact tracing was to identify and manage all contacts using existing structures and testing capacity available at that stage, the PHA delivered contact tracing as part of its normal line of business within the PHA's Health Protection service. The PHA had established expertise in risk assessment of incidents and outbreaks, and in undertaking contact tracing as a core aspect of its usual Health Protection function. Existing expertise within the PHA and specifically within the Agency's Health Protection service was key to test and trace in the very earliest weeks of the pandemic. At this point, when case numbers were small, tracing of cases could potentially have significant impact on the course of the epidemic and indeed a realistic chance of delaying community transmission.

127. The PHA had never before undertaken community testing and contact tracing at this scale during an outbreak, epidemic or pandemic or indeed for the duration subsequently required. 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 NI, as elsewhere in the UK, 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 as to be effective in breaking chains of infection. Without timely access to tests and test results, due to limitations in testing capacity given constraints in scalable diagnostic infrastructure compounded by the global demand for testing reagents, infected people might not be rapidly identified and contact tracing started. Similarly, while the PHA had business continuity plans to support a Standard and Enhanced

incident response as outlined at paragraph 129 below, in the Department's view these had not envisaged contact tracing at the scale and for the duration required during the pandemic. In addition to significant enhanced laboratory infrastructure and Covid-19 testing capacity, such a response also required significant infrastructure improvements including, for example, the establishment of a Contact Tracing Centre in Ballymena and investment in new digital systems and infrastructure as described in paragraphs 131 - 137 and with more detail set out in the later sections on Testing and Tracing.

128. 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 rapidly scalable 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 Department and the PHA worked together to develop a number of important digital innovations to address the additional data collection and sharing challenges experienced during the pandemic. This included a new contact tracing platform, using Microsoft Dynamics technology, required to handle the anticipated volume of cases and close contacts. A new Public Health Intelligence platform was also developed based on the Microsoft Synapse analytics platform. The extraction of data and the integration that was necessary to connect to other data systems arising from these enhancements was also delivered as part of this work. The integrated digital approach was an important strength of the delivery of contact tracing services. More detail is set out in paragraph 135 and in the later section on Tracing in this statement. The challenges and the approaches adopted in relation to contact tracing are reflected further in the UK CMO Technical report on the Covid-19 pandemic in the UK (Chapter 7, pages 212 - 232) [see MMcB/021 - INQ000177534].

129. While the PHA will be able to provide further details, the Department, through its sponsorship and accountability review meetings, is aware that, 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. The Department suggests that further detail on the response plan is best sought from PHA. 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.

Data Collection and Sharing

130. Proportionate data collection, analysis, sharing and reporting are key elements of any pandemic response. For this to be effective, the HSC needs appropriate data systems. From 2016 onwards, the Department had been considering the exploitation of ICT solutions and the information generated by the HSC on a system wide scale and, in 2018, defined the responsibilities of a Chief Digital Information Officer (CDIO) within the Department, with a CDIO being appointed March 2019.

131. Upon taking up post, and during the pandemic response, the CDIO led a landscape review examining key information systems in use across the HSC and the impact of the implementation of a regional Electronic Patient Record (the Encompass programme). This work resulted in the production of the Digital Strategy (Health and Social Care Northern Ireland 2022 - 2030) [MMcB7/050 - INQ000527718].

132. The strategy outlined how the HSC would rise to the challenge of delivering the digital transformation needed to improve health and care outcomes in the future, alongside standardisation of services and coordinated regional management.

133. The main strategy was underpinned by the following:

i. HSC Cyber Security Strategy – the HSC plan to manage risk and maintain resilience in its digital and cyber operations in NI [MMcB7/051 - INQ000527719];

ii. HSC Data Strategy – outlines the vision, mission, and objectives for data and information across the HSC in NI until 2030 [MMcB7/052 - INQ000183443];

iii. HSC Innovation Strategy – the structure and key considerations for digital innovation, including alignment with service priorities and the creation of a digital innovation hub [MMcB7/053 - INQ000527720]; and

iv. All-Ireland Digital capability Framework - designed to define digital health knowledge, skills and attitudes required for professional practice [MMcB7/054 - INQ000527717].

134. The documents were produced in collaboration with HSC Trusts and the HSC system, and through engagement with service users - patients, clients, carers and their families.

135. The new systems built during the Covid-19 pandemic added to the data collection and analytics capabilities of the PHA. Personally Identifiable Information (PII) stored in the bespoke contact tracing platform, and the supporting digital self-trace service supporting TTI policy, was maintained in those systems in accordance with their DPIAs (Data Protection Impact Assessment). Secondary use of information, where the PII was removed and data was then used for production of statistics or for service planning, was done in agreement with the Data Controllers. This allowed for information collected in systems where the PHA was the lead organisation to be used for the purposes of NI's response to the pandemic. The data platforms used were largely created by the nascent HSC Data Institute and then shared with colleagues across other organisations, including the PHA.

136. Data about patients was collected during the pandemic from all the systems in use at that time, covering GPs (EMIS and Vision), HSC Trusts' Patient Administration systems (PAS), and various other clinical recording systems. The Encompass programme, which is replacing the majority of Trust systems, was not live during the pandemic.

137. Under agreement with the Data Controllers, information from these existing systems was extracted to the regional Data Warehouse. This is an important service, provided by BSO, that protects the confidentiality of patients while providing timely, pseudonymised patient-based data and information for purposes other than direct clinical care, including:

    i. planning and commissioning;
    ii. public health and research;
    iii. clinical audit and governance;
    iv. benchmarking; and
    v. performance improvement.

138. Data is routinely extracted from operational systems across the HSC and loaded into the Data Warehouse.

139. The Data Warehouse is used by staff at Trust, HSCB and Department level. Access to the data is strictly controlled and, where necessary, the data is anonymised or pseudonymised. Each 'type' of user has access to only the data that he/she is permitted to have access to. The Northern Ireland Health Analytics Platform (NIHAP) was created by the HSC Data Institute during the pandemic for the purposes of advanced analytics of pandemic related data.

140. Further information on the operational and technical detail in relation to pre-pandemic arrangements for data collection and data sharing will be held by HSC Trust laboratories and the PHA. In the Department's experience, a key learning point from the pandemic was the need for enhanced systems and processes for data collection and sharing generally and in respect to the TTI system specifically. The importance of data standardisation and collection, including specifically the challenges with respect to data sharing and linkage, is addressed more fully in the CMO Technical Report, Chapter 4, pages 122 - 161 [see MMcB7/021 - INQ000137354].

Flow of Scientific Evidence

141. The Department of Health received scientific and epidemiological advice throughout the pandemic from a variety of sources. These included:

    i. data on the progression of the pandemic in NI;
    ii. discussions and papers from the UK Scientific Advisory Committee for Emergencies (SAGE) and its subgroups, and other elements of UK Covid-19 response infrastructure;
    iii. discussions at the Department's NI Strategic Intelligence Group (SIG) and NI Modelling Group;
    iv. discussions with colleagues (including clinical colleagues) throughout the NI HSC system and the other nations of the UK / ROI;
    v. outputs from World Health Organization (WHO); the European Centre for Disease Prevention and Control (ECDC); the US Federal Drugs Administration (FDA) including recommendations, scientific papers and meeting minutes; and
    vi. reports from various Royal Colleges and other bodies (including "Independent SAGE") and the wider scientific literature.

142. This evidence informed advice on all aspects of the pandemic (including Test, Trace, and Isolate), which was generally given by myself or the CSA, either verbally or in papers submitted to the Health Minister and the NI Executive by the Health Minister.

143. In terms of the general structure of policy advice and decision-making within CMOG, along with myself, the DCMOs, CSA, and the Director of Covid-19 Response and his team, were key advisors in relation to TTI policy. As such, scientific, public health and epidemiological professional advice was provided by myself and my team to inform policy and strategy in this area, supported and informed by a wide range of expert, professional and technical networks.

144. The advice provided to Ministers throughout the pandemic was based on the evidence available at the time. As above, understanding of the virus and the disease caused took time to emerge as did the improvements to the evidence base for policy decisions.

145. During the pandemic, both the CSA and I provided scientific and epidemiological advice not only to the Health Minister, but also to the NI Executive and to other Ministers as required. Advice was provided in the form of written briefings and papers, and verbally in the form of presentations to the NI Executive and verbal responses to written or ad-hoc questions where relevant from NI Executive Ministers. Mechanisms for doing this evolved as the pandemic progressed, for example with the establishment of regular briefing meetings between the FM, dFM and the Health Minister supported by senior officials in advance of meetings of NI Executive. This allowed both the CSA and I to explain some of the nuances of emerging / evolving science and epidemiology to aid Ministers in making decisions and, in particular, to make clear the uncertainties involved in modelling and other aspects of the science.

Testing

High Level Overview of Testing Strategies

146. Testing for Covid-19 (sometimes referred to as the SARS-Cov-2 testing programme) and Contact Tracing was a critical part of the pandemic response in NI. Policy in relation to how test & trace were utilised was kept under continuous review and was updated on an ongoing basis by the Department taking account of emerging scientific, clinical and public health approaches and evidence, and of emerging policy across the four nations and internationally where applicable. For example, updates to policy were made as testing capacity increased, which allowed the expansion of groups eligible to be tested, as more became known about the transmission of the virus, and as the risk posed by the virus evolved.

147. Testing policy was targeted at both population level and across a wide range of sectors, subsectors and settings. At a very high level, testing was undertaken for those with symptoms - at a population level and including a sector specific focus for example in care homes, schools and healthcare settings; and for those without symptoms (asymptomatic testing) – also offered at a population level using LFDs (from around Spring 2021) and which also included a sector specific policy for example targeted programmes in care homes; schools; healthcare settings and across business.

148. The Department put a protocol in place early in the pandemic to guide the targeted and prioritised use of available Covid-19 testing. This was set out in the first version of the Department's Interim Protocol on Testing (IPT) which was dated 19 March 2020 [MMcB7/055 - INQ000120705]. At this time, PCR testing capacity was constrained and as a result testing was primarily targeted in clinical care of the sickest individuals requiring inpatient care, protecting those caring for them, and in the management of outbreaks for example in care homes. The IPT was an operational tool which provided information on eligibility for testing and advice on how to access testing.

149. The Department presented its first Covid-19 Testing Strategy to the NI Executive on 6 April 2020 [MMcB7/266 - INQ000103649]. Priorities for testing reflected those in the IPT and were initially identified as:

i. People with respiratory conditions admitted to hospital and requiring critical care;
ii. People with respiratory conditions admitted to hospital and not requiring critical care;
iii. Key health and care workers;
iv. In circumstances to support the risk assessment and management of outbreaks/clusters in residential and other care settings (e.g. care homes and/or prisons); and
v. Sentinel surveillance in primary care/the community.

150. During this period, community cases exceeded the supply of tests and existing systems were not capable of scaling at the pace needed to meet demand, consequently testing capacity was prioritised as above. These challenges, which were common across the UK, and the approaches adopted are reflected in the UK CMO Technical report on the Covid-19 pandemic (Chapter 6, pages 185-211) [see MMcB7/021 - INQ000177534].

151. Given the fast-paced nature of events, the Department committed to keep the Covid-19 Testing Strategy under review. Following review by the Department's EAG-T, an updated Covid-19 Testing Strategy was presented to the NI Executive on 21 May 2020 [MMcB7/057 - INQ000103650] reflecting key changes and developments since the first Strategy. The EAG-T had its first meeting on 28 March 2020. While the overall priority remained testing for those patients admitted to hospital who were clinically unwell, the updated strategy set out how testing capacity had continued to expand and how that capacity was to be used. Priorities for testing set out in the updated strategy were identified as:

i. people who became unwell and required hospital admission, including patients who required critical care;
ii. health and care workers who treated and cared for those who became unwell and/or were vulnerable;

iii. circumstances where testing was used to inform the risk assessment and management of outbreaks or clusters in closed settings (such as care homes or prisons and supported living settings); and

iv. essential or key workers in sectors other than Health and Social Care (HSC).

152. The Department's Covid-19 Test, Trace and Protect Strategy (TTP Strategy; May 2020) [see MMcB7/035 - INQ000120704] set out a programme of short, medium and longer-term actions, aimed at reducing the spread of the Covid-19 virus among the population in NI, minimising Covid-19 transmission in the community by interrupting chains of infection, and in doing so preventing serious illness and death.

153. The TTP Strategy focused on rapid identification of positive cases and contacts, supported by testing and isolation. The approach was designed to:

i. break the chains of transmission of the virus by identifying people with Covid-19;

ii. tracing people who may have become infected by being in close contact with them; and

iii. supporting those people to self-isolate so that if they had the infection, they were less likely to transmit it to others.

154. The TTP Strategy was developed and implemented at a phase in the pandemic when there was no population immunity to a highly transmissible new virus which resulted in high rates of serious illness, hospitalisation and death among some of those people who were infected to which there was neither a vaccine nor specific treatments available. The Strategy acknowledged that test, trace and isolate would become a part of everyday life in NI until an effective vaccine was developed and a vaccination programme for Covid-19 delivered to the people of NI.

Expansion of Asymptomatic Testing using LFDs

155. The arrival of Lateral Flow Device (LFD) tests was in late 2020 and early 2021. LFDs produced results for self-testing within 15 minutes on average and enabled increasingly widespread asymptomatic self-testing across the population.

156. LFDs generally have lower sensitivity and specificity than Polymerase Chain Reaction (PCR) tests but once LFDs of reliable quality became available at scale, they were sufficiently reliable and accurate to enable population level, routine asymptomatic testing.

157. This supported individuals to assess their likelihood of infectiousness on a day-to-day basis and was important for allowing increased testing in many key settings such as schools, hospitals and care homes.

158. Testing strategies in NI and across the UK adapted accordingly when LFDs emerged. The general policy approach in NI when LFDs first became available was to use these in the community as an additional 'test to find' measure as part of regular asymptomatic testing. At this time, regular asymptomatic testing using LFDs was recommended for use only in addition to the full suite of public health measures, controls and practices in place already at that time including ensuring adherence to good respiratory and hand hygiene guidance, adherence to guidance on social distancing; and, in healthcare settings, the suite of other robust infection prevention and control measures in place including for example, guidance for testing and isolation of healthcare workers with symptoms, and appropriate use of Personal Protective Equipment. There are a wide range of examples of the use of LFDs including workplace testing, care home asymptomatic testing and as an additional mitigation to support hospital visitor testing [MMcB7/058 - INQ000377272].

159. This approach to testing people with no symptoms was beneficial as it enabled finding of additional positive cases (who would otherwise not have tested in the absence of symptoms) and enabled the provision of appropriate public health advice to them and their contacts regarding isolation, which helped limit spread and break chains of transmission. It also aimed to provide an additional assurance for employers, staff and the general public, and helped to boost confidence providing a greater sense of urgency and control in managing and reducing risk of infection.

160. While asymptomatic LFD testing differed slightly across the UK nations, predominantly in its deployment and timing, the overall strategic aims were similar – including:

i. Repeat testing to detect positive cases among asymptomatic individuals (and advising appropriate self-isolation to avoid putting other more vulnerable people at risk) – for example, testing of staff in high-risk settings such as the HSC and social care settings;
ii. Testing prior to an activity to reduce risk; and
iii. Wider asymptomatic testing where there was a signal of a potential outbreak (or where there had been an outbreak).

161. This approach using LFDs as an additional 'test to find' was the general policy approach regarding the use of LFDs until later in the pandemic. Further uses emerged throughout 2021, for example:

i. To guide use of the new Covid-19 treatments for those eligible; and
ii. For those isolating and contacts to assess their infectiousness and to facilitate early exit from isolation (where tests on 2 subsequent days from day 5 onwards were negative). Further details are set out later in this statement.

162. In late 2020, 2021 and 2022, more transmissible variants of Covid-19 became established as many population-wide non-pharmaceutical interventions (NPIs) were eased. This led to much higher case rates and testing demand. As a result, LFDs became increasingly central to testing strategies as a way to rapidly test people (both symptomatic and asymptomatic) at a large scale on a daily and on a weekly basis and to support appropriate actions, without needing to further expand laboratory PCR capacity.

163. In March 2022 the Department published its Covid-19 Test, Trace and Protect Transition Plan [MMcB7/059 - INQ000348966]. The Plan recognised that by that stage NI - like the rest of the UK and the RoI – was at a very different stage of the pandemic:

i. The vast majority of the adult population had been fully vaccinated, and more than half had received a booster vaccination, with further boosters planned for those people at higher risk of infection;

ii. Vaccines had dramatically reduced the risk of serious illness requiring hospitalisation for those infected with Covid-19;

iii. The vaccination programme combined with the fact that a significant proportion of the population had been infected and had recovered meant that the NI population had a high level of immune protection against the virus which causes Covid-19; and

iv. Covid-19 specific treatments were available and deployed in NI further reducing the risk of serious illness in those who were at higher risk should they become infected. These treatments bolstered our ability to protect vulnerable patients and reduce their risk of developing serious illness.

164. As a consequence, the risk to the general public of serious illness from Covid-19 had greatly reduced. It was no longer necessary or proportionate given the reduced risk posed by the virus at population level to continue to test, trace and isolate across the whole population at the scale which had been undertaken to date.

165. The Covid-19 Test, Trace and Protect Transition Plan set out a period of transition to a more targeted approach which focused test and trace activity to protect and support the most vulnerable and those at highest risk of serious illness should they contract Covid-19. This new phase prioritised:

i. Test to Treat – to support diagnosis of the disease and timely access for those who could benefit from the new Covid-19 treatments; protecting our sickest and most vulnerable from serious illness. Testing also remained available to inform clinical pathways, care and treatment;

ii. Test to Protect – to protect those living, working and visiting high risk and other vulnerable settings including hospitals and care homes;

iii. Outbreak Management - continued use of proportionate and targeted test and trace in the management of outbreaks with a continuing strong focus on high-risk settings such as care homes, in line with advice from the PHA; and

iv. Surveillance – testing to monitor virus progression and to identify early the emergence of new variants so that an appropriate public health response could be delivered.

166. The Department continued to keep the Transition Plan under review after its publication. For example, the Health Minister issued a Written Statement to the NI Assembly on 1 July 2022 explaining that, having considered the available data related to the prevalence of Covid-19 at that point, as a precautionary measure he had decided to extend the availability of LFD testing for a further period of one month until the end of July 2022 [MMcB7/060 - INQ000530951]. A key aim was to continue to help support people to take protective measures and to help protect the vulnerable against the risk of infection and severe illness.

167. Throughout the pandemic, in addition to the overarching advice and guidance for the general population, the Department took a targeted, risk-based policy approach across various sectors and sub sectors, working with a range of partners. Further detail where relevant is set out later in this section of the statement. In summary, this included:

i. A targeted approach to testing of residents, staff and visitors to care homes;

ii. Testing in supported living and a wide range of other adult social care settings;

iii. Testing in schools and schools for those with special educational needs, and in universities and further education colleges;

iv. Testing across primary and secondary healthcare settings, including priority testing for those who were most clinically vulnerable and sickest in hospital, and testing for hospital visitors;

v. Testing in prisons;

vi. Travel testing, with strategic policy agreed with the NI Executive;

vii. Testing to support more specific areas including testing of hauliers in January 2021, Ministry of Defence testing, and testing for surveillance purposes;

viii. Testing for the purposes of outbreak management including enhanced testing in local geographical areas that had stubbornly high prevalence and to help control spread in the case of the emergence of new variants. Such testing was directed by the PHA led Incident Management Teams and was sometimes referred to as surge testing. Further operational details of this can be provided by the PHA if of assistance to the Inquiry; and

ix. Workplace testing across a wide range of business, organisations and sectors.

168. Funding to support delivery of testing in NI is described at paragraphs 231 - 240 below.

Testing Strategies Evolution and the Epidemiological Nature of Covid-19

169. Testing strategies in NI evolved throughout the pandemic and considered at all times the available evidence on virus characteristics and epidemiology, including scientific and technical advice from SAGE, NERVTAG & UKHSA, along with the availability of and access to different testing modalities. Advice was based at all times on the totality of available evidence. In the Department's view it is not possible to separate out the impact of individual pieces of evidence about factors such as transmission, viral load, the R number or reproduction period on advice given in relation to testing strategies at individual time points. Examples of how these factors affected testing strategies: include "test to release" as described at paragraph 173 where those isolating assessed their infectiousness using LFDs as a measure of viral load to facilitate early exit from isolation (where tests on 2 subsequent days from day 5 onwards were negative); and the widespread use of population asymptomatic testing with LFDs to reduce the risk associated with some activities given the emerging evidence of the relative contribution of asymptomatic, pre-symptomatic and symptomatic transmission. Public communication of the importance of testing in keeping with the Testing Strategy was highlighted at times of high levels of community transmission (high Rt) or with the localised detection of a new variant.

170. Testing to identify cases had multiple applications throughout the pandemic, supporting clinical management, infection prevention and control (especially in health and care settings), contact tracing, surveillance, and to understand transmission force, transmission routes and the rates of severe disease. Testing was especially important because the symptoms of Covid-19 were often nonspecific, minimal or absent. It was therefore an early priority – in the UK and globally – to develop diagnostic tests for the SARS-CoV-2 virus. This is likely to be the case for future pandemics and major epidemics.

Herd Immunity

171. The development of "herd immunity" was never considered as a viable strategic response to the pandemic by the Department or the NI Executive, and no steps were taken by the Department to consider or implement a strategy consistent with furthering "herd immunity" between January 2020 and June 2022. The level of transmission in the early stages of the pandemic required the extensive use of NPIs and "lockdown" to get R below 1, the approach which had been agreed by the NI Executive. This was necessary to prevent excessive deaths and to prevent the health service being overwhelmed.

172. As the pandemic proceeded, the Department was clear that a high level of population immunity was needed to allow other measures to be completely relaxed. The strategy was to achieve population immunity primarily through high levels of Covid-19 vaccination, as quickly as possible, with restrictions as limited as possible, while avoiding the hospital system from becoming overwhelmed. It was also recognised that in addition to high uptake of the vaccination, natural exposure to the virus would also contribute to levels of population immunity, although this was never part of the strategic response of the Department.

Test to Release

173. 'Test to release' had potentially different meanings throughout the pandemic when used in different contexts:

i. Test to facilitate early exit from isolation (where tests on 2 subsequent days from day 5 onwards were negative). Detail is set out later in this statement.

ii. Workplace daily testing pilots as an alternative to self-isolation for close contacts of a positive case (sometimes referred to as *workplace daily contact testing*) was undertaken initially as a small pilot in December 2020 (our records indicate 2 businesses took part at that time) with interim findings shared by DHSC in January 2021. The Department understands this was trialled in England and Wales. The pilot was considered by the Department's EAG-T for example on 30 April [MMcB7/372 - INQ000437652] however the policy was not implemented in NI. The Department continued to be sighted throughout this period on ongoing considerations as part of the DHSC led *Daily Contact Testing Programme Board*. At its meeting on 30 April, EAG-T discussed concerns regarding adherence to the policy and ensuring that individuals tested every day, and the need to await the outcome of the ongoing trials. The EAG-T also noted that MHRA advice had been sought by DHSC (in relation to use of LFDs for this purpose) and that an *Exceptional Use Authorisation* was required from MHRA. While continuing to keep the position under review, given the emerging evidence base at this time, and given the relatively small Departmental and PHA resource available, the Department continued to focus efforts around this period on delivering other priorities for example on scaling the NI SMART offer (see paragraphs 276 – 281). The increased level of cases in the summer of 2021 and the ongoing concern regarding new variants were also factors in the Department's assessment.

174. The Department understands 'Test to quarantine' to refer to the general policy across all UK nations of testing those with symptoms of Covid-19 and, should the test return positive, both the positive case and their close contacts were to isolate (quarantine) in line with the policy at that time. Similarly, those who took part in asymptomatic testing programmes who returned a positive result, were asked to isolate.

Use of *Mass Testing*

175. The Department understands the term *Mass Testing* relates to the whole population experimental pilot testing using LFDs, for example as undertaken in Liverpool and a number of pilots in Wales, shortly after LFDs first became available. NI did not undertake such mass testing. A key reason for not undertaking such testing was that, at that stage in the pandemic (late 2020), the evidence base regarding the use of LFDs at population level and the efficacy of such testing was still very much emerging and large-scale pilots were already underway in other locations. The Department's position was not to pilot mass testing but to wait for definitive evidence from ongoing work, including emerging evidence from early pilots in European countries, the findings from pilot testing in the UK and advice from the SAGE Task and Finish Group on Mass Testing on the limitations of testing at a single point in time. In early 2021, seeking to optimise the effectiveness of wider population testing and maximising finite resource available at both Departmental and PHA level, the Department in my view correctly had a priority focus on shaping and scaling the NI SMART offer (see paragraphs 274 to 281) and on working with partners to develop a range of further asymptomatic testing programmes, for example in schools, care homes and other settings.

176. NI did undertake a single large event pilot exercise to support the Irish FA Cup Final on 21 May 2021 which included LFD testing as part of a range of measures to seek to reduce the level of risk associated with attendance at the game. Other measures included for example social distancing and face coverings were required at all times in the stadium except for those who were exempt. This pilot was led as part of a wider programme of work by The Executive Office (TEO), with professional and technical advice and input provided by the Department and the CSA and myself. The pilot required everyone attending over the age of 16 (approximately 1400 in total in attendance) to demonstrate that they had a negative LFD test result, carried out no more than 48 hours in advance of the event. Complete details regarding the pilot could most reliably be obtained from TEO.

Comparison of Testing Strategies with other UK Nations and the Republic of Ireland (RoI)

177. The Department did not undertake a formal or detailed comparison of the differences between testing strategies implemented in the four UK nations and the RoI. It is the case that, in addition to a range of other factors and evidence base as described elsewhere in this statement, to inform emerging policy options in relation to testing, the Department took account of the evolving approach to testing in England, Scotland and Wales throughout the pandemic.

178. The Department maintained close contact with counterparts in the other UK nations and there was close and appropriate sharing of emerging strategy and policy options across the nations to assist in informing policy development in each respective nation, with the overarching aim to achieve policy outcomes which best protected citizens in each jurisdiction.

179. In outline terms, in the Department's view testing strategies across the four UK nations were broadly similar in many ways, albeit there were differences at times in sectoral policy and in the timing of the introduction of policy changes. Some of the main similarities included for example:

    i. Large scale utilisation of the UK-wide National Testing Programme (NTP) which enabled *direct to citizen* testing, removing the test mediation and provision of results by the healthcare system;

    ii. The advent of large-scale testing of those without symptoms, primarily using LFDs emerged at scale from early 2021. While the detail of LFD testing differed slightly at times across the UK nations, the overall strategic aims were similar; and

    iii. While again the timing of changes differed across the four UK nations, the core strategic policy aims as set out in the Department's March 2022 Covid-19 Test, Trace and Protect Transition Plan reflected the general plans for transition in the other UK nations. That was, to deliver a more targeted approach which focused

test and trace activity to protect and support our most vulnerable and those at highest risk of serious illness should they contract Covid-19.

180. The Department has not undertaken any comparison with the testing strategy in the RoI. The CSA, DCMO and I met regularly with counterparts in the RoI CMO Office throughout the pandemic and discussed and appropriately shared information on testing strategies.

Decision to End Community Testing in March 2020

181. Within a few weeks of the virus being identified, because of the sharing of the genotype by scientists in China with other scientists, the Belfast HSC Trust's Regional Virology Laboratory (RVL) in NI along with only a handful of centres across the UK had the ability to test for the virus. Testing for Covid-19 was carried out using PCR and commenced at RVL on 7 February 2020. This involved testing of suspected cases on a case-by-case basis and close working with the PHA. On the 1 March 2020, following a presumptive positive test on 27 February, NI had its first confirmed positive result for Covid-19 in an individual who had recently travelled from an affected area.

182. The UK Government and the Devolved Administrations (DAs) decided at the COBR (M) meeting on 12 March 2020 to move from the containment phase to the delay phase. Attendees at the meeting from NI included FM, dFM, Health Minister, myself as CMO and officials from TEO. The decision was underpinned by the UK-wide agreed Protocol for Moving from Contain to Delay [MMcB7/061 **INQ000049539** and was in line with the UK-Wide Coronavirus Action Plan dated 3 March 2020, which was agreed by respective UK Administrations with input and advice from the 4 UK CMOs and the government scientific community, and which the Health Minister referenced in his statement to the NI Assembly of 9 March 2020 [see MMcB7/020 – INQ000103639].

183. The move to the delay phase was associated with a pause in community testing and contact tracing and the prioritising of testing for clinical care and in settings with vulnerable people.

184. The rationale underpinning the change in approach from the containment to the delay phase was based on sound public health principles and recognition that there was widespread community transmission of the Covid-19 virus although the extent of this was not fully known due to the limitations on testing capacity. Members of the public were informed that the virus was circulating, there were extensive communication campaigns to advise members of the public about symptoms to watch out for, and actions to take should they develop symptoms. The application of these population level interventions including the rigorous social distancing measures effectively superseded community level testing and contact tracing at this point. All the advice and guidance on preventing onward spread, on self-isolation and on social distancing, which previously formed the basis for the rationale underpinning contact tracing of cases and contacts, now applied to the general population.

185. Following a meeting on the 12 March 2020 of the UK CMOs which I attended, it was agreed to raise the risk to the UK from moderate to high [MMcB7/062 - INQ000052485] in response to the increase in confirmed cases. As testing was very limited at this point in time in NI and across the UK there was no robust data to definitively comment on the level of community transmission in NI. Given what was happening elsewhere in the UK, the Department believed that in the context of a highly transmissible virus, it was a reasonable assumption that transmission in NI was also increasing significantly. This was an assumption which professionally I believed to be reasonable. In raising the alert level, as UK CMOs we were also signalling to decision makers the increased risk to the population and the need for additional government action and intervention. In the UK, as of 10 March 2020, 345 people had tested positive for Covid-19; 302 of these were in England, 27 in Scotland, 6 in Wales, and 16 in NI. While the number of confirmed cases in NI remained relatively modest this was in the absence of widespread community testing and surveillance and the Department suspected there was highly likely to be significant numbers of undiagnosed cases.

186. The pause in community testing and contact tracing was also informed by a number of operational factors. This included the requirement to optimise the use of available testing capacity. Testing capacity at this time was insufficient to identify all cases that needed to be contact traced and available tests needed to be prioritised for clinical care and in settings with vulnerable people such as hospitals and care homes. This in

turn impacted the effectiveness of contact tracing, as only a limited proportion of cases in the community were being picked up through testing. In addition, in the first wave, as case numbers increased very rapidly, the existing contact tracing workforce, infrastructure and systems were not able to handle such a large increase in demand, nor to maintain contact tracing at the intensity and scale required to ensure chains of transmission were interrupted as effectively as possible. Even if the testing capacity had been available, there is a question as to how effective contact tracing would have been if it had been maintained given the likely level of community transmission and the limitation in the PHA's ability to scale capacity in the service quickly enough.

Testing Strategy in Periods of Increased Infection

187. Testing strategy evolved during the course of the pandemic taking account of multiple factors. Availability of tests was particularly important early in the pandemic and led to difficult decisions in relation to prioritisation of the use of available tests. Testing strategies did not specifically plan for increases in infection rates; rather strategies adapted in response to increases in case numbers and availability of testing, as outlined previously, in line with emerging scientific, clinical and public health approaches and evidence.

188. The scale up in available testing capacity and the availability of new test types and potential uses, in particular LFDs, were significant elements of testing strategy. As the availability of tests increased, we were able to detect a higher proportion of cases in the community, so the relationship between testing and case numbers was a complex one. Similar levels of community prevalence at different stages of the pandemic were associated with very different numbers of detected cases, mainly as a result of increased testing availability.

189. In late 2020, 2021 and 2022, with more transmissible variants established, the easing of many population-wide NPIs and increased availability of testing, much larger numbers of cases were detected than earlier in 2020. As a result, LFD tests became increasingly central within our testing strategies as a way to rapidly test symptomatic and asymptomatic people without needing to further expand laboratory capacity.

190. An important strategy in periods of increased prevalence when testing was freely available was the use of public communication campaigns to highlight the main public health guidance around testing and the availability of tests. This included, for example, communication from the Department and from the NI Executive regarding the need to isolate immediately and get a PCR test for those with symptoms; and, later in the Christmas 2021 period, strong encouragement to make use of regular workplace testing programmes, and to take an LFD before attending events.

191. Changes in testing policy also assisted in periods of peak prevalence. For example, as explained at paragraph 199 below, the requirement to take a confirmatory PCR test following a positive LFD was removed on 5 January 2022 to make best use of the range of test types available and protect PCR capacity to provide the most public health and clinical benefit.

Testing Technologies

Testing Technologies and Characteristics

192. Broadly speaking, there were 3 testing methods developed for use in NI and across the UK. A brief overview of each and their key characteristics is as follows (further detail on the methods above is set out in the 4 UK CMO's Covid-19 Technical Report (chapter 6) and is not repeated here) [see MMcB7/021 – INQ000177534]:

i. Molecular tests to detect viral ribonucleic acid (RNA) – these were PCR tests processed in a laboratory. These tests were highly sensitive and specific, and had longer turnaround times than LFDs. The PCR test was considered the best standard laboratory test for detecting Covid-19 infection. It was the main laboratory-based technology used in NI throughout the pandemic for detection of the virus and enabled high throughput laboratory testing, with multiple platforms and kits using real-time PCR;

ii. Antigen tests to detect viral proteins – these were LFDs which gave rapid results (within 15 minutes on average) at the point of testing by the individual. These were therefore convenient and did not require a laboratory. LFDs are less sensitive than

PCR tests. However, they were shown to be effective in indicating high viral load and were used as an indication of likely infectiousness; and

iii. Serology (Antibody) tests were used to detect antibodies and were available from February 2020. Many healthcare workers across the UK and in NI were offered antibody testing to judge potential immunity status. Using antibody testing to guide individual interventions required extensive understanding of reinfection and immunity across different individuals, and potential use cases for antibody tests were treated with care. Antibody testing was also an important tool for research throughout the pandemic – for example, in the SIREN study on healthcare staff and ONS studies. The SARS-CoV-2 immunity and reinfection evaluation (SIREN) study was established early in the pandemic with participants (healthcare workers across the UK including Northern Ireland [see MMcB7/357 - INQ000450525 and MMcB7/358 - INQ000450528] undergoing regular testing). The study provided some of the earliest real-world estimates of vaccine effectiveness and reinfection rates in the working age population. It helped the UK to evaluate the immune response to Covid-19, build understanding of the protection offered by vaccines and provide insight into Covid-19 reinfections. The primary aim of the UK Covid-19 Infection Survey was to estimate the incidence and prevalence of Covid-19 and the proportion of the population with antibodies. The survey was published weekly [see for example MMcB7/359 - INQ000373479 and MMcB7/360 - INQ000381355] and helped over time track the extent of infection of Covid-19 among people living in private households (some further detail is set out at paragraph 686).

193. NI, like all 4 UK nations, continued to examine alternative test types as new technologies became available, see also for example those described at paragraph 252, and to improve accessibility to testing throughout the pandemic such as saliva sampling:

i. Loop-mediated isothermal amplification (LAMP) is a rapid amplification technique that takes less than 20 minutes to provide a result in a laboratory. The LAMP assay was validated by the DHSC Technical Validation Group in December 2020. In NI a project team was established in late 2020 to consider use of LAMP. This operational group comprised the PHA, Belfast HSC Trust and Queens University Belfast

[MMcB7/101 - INQ000439437 and MMcB7/125 INQ000408167]. The group met on an ongoing basis to support the programme of asymptomatic testing of healthcare workers using LAMP technology, with progress reported to the EAG-T. Further details to assist the Inquiry, for examples regarding its terms of reference and recommendations, may best be provided by the PHA and relevant HSC Trusts. LAMP testing using saliva samples was used in NI for asymptomatic testing in schools for those with special educational needs (see paragraph 325) and of healthcare workers, but there were challenges with deploying LAMP testing at scale. The Department understands these included various logistical and operational challenges for example regarding automation of processing, information governance and digitisation of results sharing. The Department suggest further details are best sought from PHA;

ii. LFDs with saliva sampling methods did not pass UKHSA performance tests until relatively late on in the pandemic; and

iii. PCR with saliva sampling would have required changes to laboratory and logistics infrastructure which would have been costly, while the benefits in increased uptake were not compelling in evaluations by DHSC/ UKHSA.

194. The NTP predominantly used nasal and throat swab-based sample collection methods for PCR and LFD, later switching to nasal only LFDs when performance was validated as these were easier and more convenient to use, for example for children. There were also a range of new rapid testing technologies considered and used in Pillar 1 settings for example Lumira DX which are described in more detail below at paragraph 205.

195. Advice on testing methods to be adopted was obtained and triangulated from various sources throughout the pandemic including relevant national and local groups and taking account of international developments. This included wider scientific and public health advice including for example from SAGE, UKHSA, discussions at UK Senior Clinicians and the UK CMO Meetings, and from local groups including EAG-T, SIG and the NI Pathology Network including the RVL. Departmental officials, the PHA and other members of the EAG-T also had established links with policy and professional

counterparts in UKHSA and in the other DAs, and considered emerging evidence and information on an ongoing basis throughout the pandemic to inform the changing approach to testing policy and the use of different test technologies across a wide range of settings. This included advice on sensitivity, specificity, and positive and negative predictive values, and to rule in and rule out infection.

196. By way of a specific example advice considered, data and evidence on specificity was important to underpin an expansion in the use of LFDs for asymptomatic testing in NI and across the UK in early 2021. Analysis published on 10 March 2021 showed LFDs to have a specificity of at least 99.9% when used to test in the community and could be as high as 99.97% [MMcB7/063 – INQ000530952].

197. The outcomes of the Liverpool Community Testing Programme using LFDs were considered as part of the overall evidence which informed testing policy development, along with advice from SAGE and international evidence. Based on the totality of available evidence, widespread general population testing of asymptomatic individuals as piloted in Liverpool was not recommended in NI. Details regarding the rationale supporting this position are set out at paragraph 175 and included that, at that time, the evidence base regarding the use of LFDs at population level and the efficacy of such testing was still very much emerging. The position taken by the Department was supported by a number of discussions including those at the working group convened by CMO on 30 November 2020 to inform the NI approach to the use of emerging LFD technology (see paragraph 274 and supporting exhibits/ discussion papers); a number of discussions at SIG including consideration of relevant papers from SAGE [see for example MMcB7/361 - INQ000422257; MMcB7/362 - INQ000422255; MMcB7/363 - INQ000422256; MMcB7/364 - INQ000422268; MMcB7/365 - INQ000422271; MMcB7/366 - INQ000422272; MMcB7/367 - INQ000422275], and consideration by EAGT of the emerging pilots in England and Wales [see for example, MMcB7/368 - INQ000437623 and MMcB7/369 - INQ000437625 at Appendix 1]. The Minister agreed priorities for the use of LFD pilots and for the NI SMART programme based on advice from officials, including CMO, CSA and policy officials, and updates were provided to the NI Executive on the emerging programme. For example, the Department provided a paper at the NI Executive meeting of 19 November 2020 [MMcB7/044 -

INQ000137370 which included the Department's assessment on the use of mass testing at that time:

C) Use of mass testing:

14. There has been considerable interest in the potential of mass testing to reduce transmission of the virus. However, it is important to recognise that this is largely based on theoretical considerations and there has been as yet no clear demonstration anywhere in the world that mass testing can significantly reduce transmission in a short period against the background of a high level of community transmission.

15. Experience in Slovakia suggested in 4 pilot areas that mass testing of the population in a short period of time (with around 90% of adults participating) could reduced the prevalence of the virus by approximately 50%. It is too early to assess the impact of testing in Liverpool. However, of note only around 20% of the Liverpool population have been tested in a period of 10 days.

16. Mass testing of the NI population aged between 14 and 65 would require around 1 million or more tests to be administered, and that all of those testing positive should be supported to self-isolate for a period of at least 10 days in the run up to Christmas. The ongoing ONS survey suggests that around 0.7% of the population would return a positive test, and using lateral flow tests it is likely that at least 30% of cases would be missed due to limited test sensitivity.

17. Modelling suggests that repeated mass testing of most of the population would be required to maintain control of transmission by this means. This would require a very high degree of population buy in and would present huge logistical challenges. Both Slovakia and Liverpool have required military logistical support to deliver their programmes and at least a two week run in before testing was implemented. It remains unclear whether the required number of tests would be available to NI. This is further discussed in Annex 2.

18. At present, given the uncertainties discussed above, reliance on mass testing would represent a high risk approach in the run up to Christmas in the absence of

significant other restrictions. In addition, it may not be feasible for logistical or test supply reasons.

19. There may be scope to target more limited mass testing to high risk areas; this would be of help but would not avoid the need for NI wide restrictions.

197a. No independent NI analysis of false positive rates was conducted, as we believed that the overall evidence base on this issue was sufficient and there was no reason to consider that the position in NI would be different.

198. The general early consensus across the various fora, at paragraph 195 above, when LFDs first emerged was that while they were less sensitive than PCR tests, they were shown to be effective in indicating high viral load and were therefore most useful as an indication of likely infectiousness. For example, there had been extensive clinical evaluation from Public Health England and the University of Oxford that showed LFD tests as specific and sensitive enough to be deployed for population testing, including for asymptomatic people. The general policy approach in NI when LFDs first became available was that LFDs were only suitable for use as an additional 'test to find' measure.

199. From an early stage, the impact of population prevalence on the positive and negative predictive values (PPV and NPV) of LFDs was recognised and discussed. While sensitivity and specificity remain constant, PPV and NPV are dependent on prevalence within the population being tested. Policy in relation to the use and use cases for LFD testing was kept under continuous review by the Department, also taking account of the sensitivity and specificity of the tests and how the tests performed in high and lower prevalence settings. One example of this was in January 2022 when NI was experiencing a period of particularly high prevalence given the dominance of the Omicron variant, the Health Minister agreed to a proposal to remove the need for a confirmatory PCR test following a positive LFD result. The proposal took account of available scientific and public health evidence that, in summary, as prevalence of Covid-19 in the population increased, the chance that an individual's positive LFD result was a false positive reduced. Therefore, the benefit of requiring a confirmatory

PCR test to prevent unnecessary isolation became less [MMcB7/064 –

INQ000444551

Efficacy of Tests and Assurances Regarding Performance

200. All tests are susceptible to errors which lead to less than 100% sensitivity and specificity, and this was recognised and considered as part of overall advice throughout the pandemic. Sources of error in the case of PCR and LFD tests for the SARS-CoV2 virus can be pre-analytical (i.e. related to sample collection and processing), analytical, or post-analytical (i.e. related to the interpretation of results). These issues were discussed within NI and factored into overall advice which was provided to Ministers throughout the pandemic. This included, on occasions, detailed discussion by the CSA and I in response to oral questions about testing accuracy at NI Executive meetings.

201. The Department does not hold a contemporaneous, composite list of errors or issues relating to the accuracy or reliability of testing in NI and when these were reported to the Department. In response to correspondence and requests for information from the public, from public representatives and others on a wide range of issues relevant to the performance of tests (for example in relation to PCR tests, the CT values, cycle thresholds, and isolation of the Covid-19 virus) Departmental officials sought specific technical advice and input from laboratory colleagues in RVL, and at times from UKHSA in relation to PCR testing in Lighthouse Laboratories.

202. With regard to the performance of tests procured and used through the NTP, including LFD and PCR, the Department generally accepted and took assurance from the expert technical validation and verification processes established by UKHSA to inform the NTP procurement strategies, and from arrangements to assure the performance and standards of the Lighthouse Laboratory Network for PCR testing. This included for example:

    i. the evaluation processes established by DHSC in mid-2020 to support NTP procurement strategies;

ii. the ongoing NTP technical test validation structures throughout the pandemic (for example, through the UKHSA led Technical Validation Group reporting to the Technologies Validation and Assurance Board for final approvals) and related information and data sharing with DAs;

iii. the role performed by the UKHSA Lighthouse Laboratory contracting, performance and standards teams; and

iv. the UK-wide Coronavirus Test Device Approvals (CDTA) regime which was a government led validation process for private sector suppliers of Covid-19 detection test [MMcB7/065 – INQ000463188 and MMcB7/066 – INQ000530954].

203. Work was also undertaken, led by DHSC/ UKHSA, to engage with the UK Medicines and Healthcare products Regulatory Agency (MHRA) to help facilitate alignment with regulatory requirements for example in relation to LFDs, and DAs were invited to attend relevant meetings. Further, all DAs including NI had ongoing links throughout the pandemic to fora established and led by DHSC/ UKHSA to discuss and raise relevant issues related to regulatory standards and performance of tests, and to receive updates from DHSC/ UKHSA and MHRA. NI engagement with these fora was generally led by PHA members of EAG-T.

204. The assessment of standards and performance of LFD tests as part of the DHSC / UKHSA procurement cycle also considered the potential for LFDs to identify new variants. UKHSA also considered evidence of extensive testing of all LFD products and determined which devices met the specificity and sensitivity requirements to inform procurement options. DAs were invited to attend relevant meetings, for example the UKHSA led Design Authority Review Team meetings.

205. In addition, while DHSC / UKHSA led work through the NTP to oversee and assure the performance and standards of tests, there was also some 'real-world performance' assessment undertaken on a much smaller scale by NI laboratories to confirm performance in the local setting prior to deployment of new tests. This included for example to assess the performance of new testing technologies used in Pillar 1 HSC

laboratories (for example, Lumira DX, SAMBA II) and some small scale assessment of the performance of some LFD types (in early 2021 when LFDs were first introduced). This work reported through to the EAG-T and involved HSC Trust laboratory colleagues and was co-ordinated through the NI Pathology Network Respiratory Testing Group.

206. An example of action taken by the Department in response to advice regarding the performance of tests was, in March 2022, when the Department was informed that one of the testing assays used in NI (Seegene) had initially failed the UKHSA CDTA validation process [MMcB7/067 - INQ000530955 and MMcB7/068 - INQ000530956]. The Department and members of the EAG-T engaged immediately in March 2022 with DHSC/ UKHA and with other key stakeholders when made aware of the initial failure. UKHSA subsequently informed the Department in October 2022 that the assays had passed the validation process after the manufacturer had provided further information. [MMcB7/069 – INQ000530957]. The Department engaged with scientific and policy counterparts in the other DAs (the assay was used in both Scotland and Wales; it was not used in England) and with the NI Pathology Network, the RVL and other Pillar 1 NI HSC laboratories to develop contingency plans should the assay be withdrawn from use. Following further engagement by the manufacturer with the CDTA validation processes the assay passed validation checks and the contingency plans were not required. The Department and I continued to work closely in the intervening period through the EAG-T, with the NI Pathology Network and other stakeholders to monitor the situation closely [MMcB7/070 – INQ000530958].

National Testing Programme

207. On 22 March 2020, NI decided to join the NTP led by DHSC in England. The principal reason for the decision was that it offered a rapid route to access large scale PCR capacity for the NI population given the unfolding emergency situation. Participation in a centrally led, national programme was also beneficial in terms of efficiency and effectiveness given the relatively small size of and resource available to the Department and the many competing priorities across the emerging pandemic response in an extremely complex and fast moving period. The Minister approved the decision on the advice of senior Departmental officials. This decision was

communicated to DHSC on 23 March 2020. Delivery of the NTP in NI was underpinned by a Memorandum of Understanding (MoU) between the Department and the Health Secretary acting through DHSC, England, and then from October 2021, by the UKHSA. The Department understands that each DA Minister of Health signed the same MoU with only minor adjustments to take account of local issues where relevant. The original MoU was signed on 29 April 2021 and a revised version on 12 October 2022 [see MMcB7/033 - INQ000467330, MMcB7/071 - INQ000503807 and MMcB7/072 - INQ000503803].

208. Testing services enabled in NI through the MoU included for example the set up and operation of the public facing, walk-in PCR test sites and other delivery channels (including mobile testing units; home delivery testing and care home testing through the *Satellite Channel*). The MoU also provided for procurement and contract management arrangements by DHSC / UKHSA on behalf of NI in relation to all the supporting logistics, distribution, digital infrastructure (test booking and results reporting; and backend data collation and reporting functionality) and the laboratory processing capacity at Lighthouse Laboratories.

Expansion of Pillar 2 PCR Capacity – Lighthouse Laboratories

209. The Department considers that NI benefitted greatly from participation in the NTP. Access to the Lighthouse Laboratory network established as part of the NTP was a significant enabler for NI to greatly expand access to PCR testing capacity at pace and scale. To provide a sense of the relative scale of Pillar 1 and Pillar 2 testing – Pillar 1 testing capacity increased to its highest reported level on 15 July 2022 of 5,368 daily capacity (which included PCR and new testing technologies such as LumiraDX); while the highest daily capacity via the Pillar 2 network was up to 25,000 during September 2021 (increased to this level temporarily in agreement with DHSC from a baseline in that period of up to 15,000 per day).

210. By April 2020 the NTP had been stood up to provide population testing in NI and across the UK at an unprecedented scale. Large Lighthouse laboratories were set up to provide high throughput PCR test processing at speed, and a digital infrastructure was created to track and locate tests and communicate results, and link to HSC and

Contact Tracing records. The vast majority of PCR tests taken by NI citizens were processed at the local Randox laboratory.

211. Given the relative size of the Department here, and significant capacity challenges in responding across all policy elements of the pandemic response, it is the Department's and my professional view, that – even working with other Departments across the wider NICS – it would have been extremely challenging, if feasible at all, for NI to establish and maintain a local testing programme along the lines of the NTP at the scale and pace required.

212. In the main, the Department considers that the NTP arrangements worked effectively in ensuring the availability and consistency of access to testing across NI. For example, there were a small number of instances in periods of peak testing demand where NI, working directly with DHSC and UKHSA colleagues, agreed a short-term increase to PCR testing capacity (that is, above the NI Barnett share allocation – see paragraph 232 below) available through NTP test sites and supporting Lighthouse Laboratory PCR processing capacity. This was monitored closely by DHSC / UKHSA colleagues together with NI counterparts and returned to baseline levels when the increased demand reduced. The Health Minister and I were made aware in these rare cases. As previously described, an example of this was in September 2021, in response to increased demand for testing in NI driven in large part by the return to school, DHSC agreed to enhance NI capacity for a period increasing to 25,000 per day from a baseline at that period of 15,000 per day. This was a particularly good example of the benefits of the NTP operating in practice as a single networked laboratory capacity, overseen and co-ordinated centrally by DHSC / UKHSA, where demand pressures in one nation could be assisted for a short period of time by overall capacity and demand management across the network. The Department understands there were examples where the other nations similarly benefitted. It was also a good example of effective collaborative working to support delivery of the NTP in NI. Further information on contract volumes and the overall management of the PCR network is likely to be available through DHSC / UKHSA.

213. All Lighthouse Laboratories contracted under the NTP were procured and contract managed by DHSC / UKHSA including through its contract management and

laboratory standards teams. Governance, oversight and management of laboratory standards and performance issues were the responsibility of DHSC / UKHSA under those contract arrangements. On rare occasions, the Department was involved in direct discussions with UKHSA regarding the local Lighthouse laboratory in NI.

214. As part of the NTP, each DA nation had access to PCR testing capacity in line with its population share (Barnett) allocation. DA Ministers, including the Health Minister in NI, had control of how the Barnett share allocation was used including eligibility and prioritisation criteria. The exception to this was the Home Ordering PCR Channel where daily capacity was set and managed at a UK-wide level by DHSC / UKHSA. The overall management and monitoring of the PCR capacity allocation across all delivery channels was managed centrally on an ongoing basis by the DHSC / UKHSA teams. The allocation available to each nation fluctuated over time due to a range of factors, for example the available allocation increased as additional capacity was procured by DHSC / UKHSA and brought online across the network (for example as part of Winter surge planning) and may have decreased, for example if there were processing issues at particular laboratories or if a laboratory contract ceased.

National Testing Programme - Procurement and Supply

215. All supply, procurement and supporting legal, commercial and Value for Money considerations as part of the NTP were undertaken by DHSC / UKHSA colleagues (and latterly UKHSA) on behalf of DAs, from the initial market approach through to award and monitoring of the contract with the supplier. This includes procurement in relation to antibody testing and all the new emerging testing technologies (including for example LFDs, LAMP, Lumira DX and SAMBA II). The arrangements for NTP contracts are set out in the MoU (section 4) [see MMcB7/033 – INQ000467330]. The Department did not undertake any procurement role through the NTP, nor did the Department operate any separate or local programme for the manufacture of PCR or LFD tests in NI.

216. The NTP arrangements for manufacture, supply and procurement of tests did not interface directly with any formal clinical trials and approval processes in NI. As set out above at paragraph 202, validation and assessment of performance of tests kits was

led by DHSC / UKHSA as part of the NTP end-to-end procurement process, with some smaller scale local performance assessment undertaken in NI.

Adequacy of Supply of Tests

217. As explained earlier in this statement, testing capacity more generally was constrained early in the pandemic which meant that available testing capacity was prioritised for those needing clinical care, and to protect the sickest and most vulnerable and those healthcare workers caring for them. The Department did not conduct any formal reviews of the adequacy of supply although this was monitored by the PHA and by the Department on an ongoing basis. Reviews of eligibility and prioritisation of available capacity are described from paragraph 263.

218. In overall terms, other than at the outset of the pandemic, the Department considers that the supply of, and access to, LFDs and PCRs was generally adequate. There were however some instances in periods of particularly high demand for testing when access to sufficient PCR capacity was a challenge in NI and across all UK nations. At these times, the Department worked with the PHA, UKHSA and others, for example the NI Pathology Network, to best protect and optimise the available PCR laboratory capacity through a range of policy and operational mitigations.

219. An example of this was on 24 December 2021, due to a period of exponential growth in Omicron case numbers in NI, the Health Minister approved a range of updated policy measures across TTI policy aimed at optimising PCR testing and contact tracing capacity. This included: changes to isolation and management of positive cases and of close contacts, with the latter no longer required to take a PCR test; an agreed PCR prioritisation plan should that be required in the weeks ahead with further pressure on PCR capacity anticipated; and an operational escalation of the PHA's Contact Tracing Service Contingency Plan. These changes were communicated to the NI Executive on 24 December 2021 [MMcB7/073 - INQ000348903]. These measures continued to be kept under continuous review by the Department and further policy interventions were agreed by the Health Minister on 3 January 2022 to remove the need for a confirmatory PCR following a positive LFD result. These changes were in line with policy changes in the other UK nations. During these periods, there were also

communications from both the Department and the PHA urging the public to only take a PCR test where necessary [MMcB7/074 – INQ000530959].

220. In relation to operational measures, as described, UKHSA teams were responsible for overall management of the Pillar 2 laboratory capacity network. At times of peak demand across the UK, UKHSA teams took steps to manage or restrict access to the online PCR Pillar 2 booking portal (for example, by switching this off for periods during the day). At times, this caused some concern and frustration to members of the public, public representatives in NI and others about a lack of capacity. A summary of this feedback has not been retained by the Department. UKHSA explained that these steps were necessary to ensure that the available Lighthouse Laboratory capacity across the network was not exceeded; to help avoid backlogs in laboratory processing; and to protect sample processing and results turnaround times. These were challenging assessments and required dynamic action and decision making by UKHSA colleagues.

221. During the period December 2021 to January 2022, there was also a considerable increase in demand for LFD tests. Through proactive communications, the Department sought to reassure the public that there was sufficient supply of LFDs in NI and sought to assist the public by again highlighting the range of collect and online ordering options. The Department also highlighted that, due to the high demand, tests available via the national online and 119 telephone ordering home delivery service may be released in batches throughout the day, and that should the public not be able to order tests immediately, they were encouraged to check again regularly throughout the day if they were available [MMcB7/075 - INQ000383175]. The Department also worked with colleagues in UKHSA and Business Services Organisation to help ensure LFD stocks in pharmacies were replenished on a timely basis during this period, including establishing at short notice a schedule of additional deliveries over the weekend and holiday periods [MMcB7/076 - INQ000383192].

222. As referenced earlier at paragraph 212, there was also a small number of instances during periods of demand for testing in NI where the Department worked directly with DHSC and UKHSA colleagues to agree a short-term increase to PCR testing capacity available through NTP.

Consistency of Supply

223. There was a significant level of ongoing engagement between the 4 UK nations across a wide range of matters in relation to the NTP. One of the outworkings of the NTP and the supporting MoU was to enable and facilitate a consistent approach in principle to the supply of PCR and LFDs across the four nations. In summary, this involved each nation receiving a population (Barnett) share of NTP capacity enabled through NTP contracts.

224. Provision for the procurement of LFDs and other new testing technologies was also made in the NTP MoU and, again, this facilitated a consistent approach based on population / Barnett share. If a DA chose to opt into these procurements, it received a population share of the overall volume of tests procured which each DA could then use in line with its local policy prioritisation choices. Detailed records were retained by UKHSA central teams to underpin these transactions and allocations. The NI SMART team engaged with UKHSA regarding oversight and drawdown of the NI allocation of LFDs, and similarly the NI Pathology Network engaged with the DHSC / UKHSA Procurement Team to ensure delivery of NI's allocation of the new testing technologies used in Pillar 1 sites.

225. Separate to the NTP Pillar 2 supply arrangements described at paragraph 209 above, due to global supply challenges, supply of the tests and reagents required for the Roche testing platform was restricted and was subject to the national allocation process for long periods throughout the pandemic. There was a particular dependence in NI HSC Pillar 1 laboratories on the Roche testing platform and reagents which presented some unique challenges. At times throughout the pandemic, particularly when rates of testing for Covid-19 in NI were higher than other parts of the UK, this meant that the NI pro-rata population share allocation was not sufficient. As CMO, I wrote several times to colleagues in England and was successful on some occasions in securing a greater share of Roche test allocations for NI. The NI Pathology Network also represented NI on the UKHSA Procurement Leads and UKHSA Roche Allocation groups and made efforts to secure adequate reagents for the region. There was also work by the Department through EAG-T and partners – including through the work of the Covid-19 Testing Scientific Advisory Consortium (see

paragraph 245) – to diversify testing platforms used across the Pillar 1 network aimed at building a more resilient HSC capacity base with access to other testing platforms and to locally produced reagents required.

226. While the Department has not undertaken a detailed comparison, we understand that the roll-out and supply of PCR and LFD tests was broadly similar across the four UK nations and was largely based on the NTP supply and delivery channels as described previously including for example: PCR physical testing sites; home testing service; organisation-led testing for example in care homes; and in relation to LFDs, home ordering; workplace testing and collect sites and, earlier in the rollout of LFDs in particular, some Assisted Testing Sites. The Department also understands that all four nations had a broadly similar approach to Pillar 1 testing in that each availed of PCR testing and made use of various new testing technologies; albeit at times the specific uses for tests, the technologies used and timings for introduction may have differed. All four UK nations kept in close contact throughout the pandemic and openly and appropriately shared information and emerging practice across testing policy areas, including in relation to roll-out and supply of tests, in the shared interest of best mitigating the impact of the pandemic. This information was also shared at a high level with colleagues in the RoI at the meetings between myself and my counterpart in the RoI and respective teams.

Collaborative Working to Support the National Testing Programme

227. The Department considers that in general the four UK nations worked well together to support delivery of the NTP, and the level of cooperation proved to be effective. The Department is grateful to DHSC / UKHSA for the lead role played in establishing, managing and overseeing all aspects of delivery of the NTP on behalf of the UK nations. Operational delivery of the NTP in NI was managed under contracts procured and put in place by DHSC / UKHSA. The PHA worked closely with DHSC / UKHSA, and with the local test site operator contracted by DHSC / UKHSA, to manage and oversee operational delivery and would be best placed to comment on the effectiveness of those working relationships. The Department also worked closely and effectively with both the PHA and with DHSC / UKHSA teams. There were undoubtedly many logistical and practical challenges in establishing a testing

programme at this scale and pace, and the pace of work required was in itself a challenge to sustain for small teams in the Department and in the PHA. In the Department's view, a key factor that increased the effectiveness of collaborative working and assisted in addressing these challenges was a genuine shared objective across all partners to deliver outcomes which best protected citizens in NI and across all nations.

228. The operation and delivery of the NTP was supported by a large number of policy and operational teams and personnel in DHSC and latterly UKHSA. These teams and personnel seemingly changed quite often due to internal restructuring as the pandemic progressed. At times this was difficult to keep pace with given the relatively small number of staff dedicated to testing in the Department and the PHA and presented some challenges for officials with regard to communication, navigating the NTP structures and teams, and attending the high volume of meetings and groups to keep abreast of developments across a wide range of areas. The establishment of the internal UKHSA Devolved Administrations Engagement Testing Operations team – which acted as a single point of contact for queries from DAs – was a helpful mitigation, albeit this remained a challenge.

229. Despite the success of the rapid scale up of the NTP public facing digital systems, there were rare occasions when the booking platform was problematic for NI citizens. One example, which caused some concern from members of the public, public representatives and others was, in September 2020 during a period of high demand for tests, the PCR booking platform directed a small number of NI citizens for a short period to Pillar 2 test sites in Scotland as the nearest available test site. This was linked with a functionality issue whereby the booking platform did not recognise the Irish Sea and journey times. The issue was raised by NI officials swiftly and a digital fix resolved by colleagues in DHSC. In the intervening period while the fix was progressing, the Department encouraged anyone who tried to book a test and was unable to do so or was offered a location or date and time which was not convenient, to wait a few hours and try again.

230. PCR capacity that NI availed of through the NTP Lighthouse Laboratory network (Pillar 2) was not integrated or interoperable with HSC Pillar 1 PCR testing capacity.

However, data collection and secure data sharing arrangements of PCR and LFD test results to the NI Central Test Registry were established. Provision for data sharing was made in the MoU. Further detail is set out below from paragraph 286.

Funding to Deliver Testing Strategies in NI

231. In summary terms, funding to deliver Covid-19 testing in NI was provided through two routes:

    i. Firstly, provided by the UK Government to support delivery of the NTP. This was supplemented in financial year 2022/23 by the Department following conclusion of the UKHSA financial reconciliation for that financial year (see paragraph 235); and

    ii. Secondly, provided under Departmental funding arrangements (as modified during the pandemic) to support delivery of overall HSC laboratory services (including Covid-19 Pillar 1 testing). This included additional funding in the pandemic period from the Department to support increased whole genome sequencing and to support additional PCR capacity through the Academic Testing Consortium at AFBI and Almac (see paragraph 245).

National Testing Programme – Pillar 2

232. From its inception, a general funding premise underpinning the NTP across the four UK nations was that NI and the other DAs received a Barnett (population-based) share of NTP capacity in lieu of the consequential funding they would otherwise have received from health spending in England. In line with the Barnett formula at the time, NI received a 2.85% population share. Later (from 1 April 2021), under the terms of the MoU, DAs had the ability to opt-in or out of significant procurements (over a value of £25m threshold) of new testing technologies procured under the NTP (for example, procurement of LFDs or LumiraDX). It remained the case that the majority of procurements and contracts made by UKHSA were to support delivery of the UK-wide NTP and supporting networks (for example, Pillar 2 test sites and supporting logistics and digital, and Lighthouse laboratory capacity). These remained UK-wide and DAs

did not have an opt-out option. Funding for the procurement of LFDs and other new testing technologies was also managed through the NTP funding arrangements.

233. The funding arrangements to support the NTP were complex and evolved as the pandemic progressed. To support the funding and financial arrangements underpinning the NTP MoU, and in recognition of the complexity, officials in NI and the other DAs worked with DHSC/ UKHSA to agree DAs Financial Guidance [MMcB7/077 - INQ000503801].

234. In summary, expenditure and funding under the NTP fell under three broad headings:

    i. UK-wide expenditure: for example, the networked Lighthouse Laboratory PCR capacity; IT infrastructure costs including the digital booking, ordering and results reporting platforms; and supply chain and logistics costs which involved the end-to-end supply chain across the whole UK, for example, international procurement of LFDs, warehousing and storage of kit and materials, transport and fulfilment to end destination for all PCR and LFD testing throughout the UK, return logistics for PCR tests back to laboratories for processing, and the ancillary services to support IT and people. This covered the majority of NTP spend;

    ii. Expenditure that was for England and at least one other DA: for example, the procurement of new testing technologies where a DA opted-in (such as NI opted-in to LumiraDX procurement); the DA element was charged against the year-end financial reconciliation by UKHSA and resulting Budget Cover Transfer (BCT); and

    iii. Expenditure which was England only: and therefore, attracted a Barnett consequential for DAs in the normal way, for example Contact Tracing and Pillar 1 laboratories in England.

235. The DAs Financial Guidance supplemented the NTP MoU and was aimed at ensuring transparency and accuracy around processes for ensuring that appropriate Barnett consequentials from procurements were identified and made available to the DAs. The guidance also helped ensure that the supporting detail and complex financial

reconciliations that underpinned the NTP funding arrangements – which were undertaken and overseen by DHSC/ UKHSA, for example to take account of the financial impacts of DAs opt-in/ out procurement decisions - were transparent. Following these detailed UKHSA reconciliations, BCTs were calculated by UKHSA and transfers made as required in relation to each relevant financial year. Reconciliations were the responsibility of UKHSA. There were ongoing discussions between UKHSA and DAs, including regular update reporting by UKHSA to DAs.

236. Under the NTP, decisions in relation to procurement were taken by the UKHSA Investment Board. DAs attended the Investment Board from March 2021. DA opt-in/out decisions were typically reported at, or shortly after, Investment Board meetings.

237. An amended MoU underpinning the NTP was signed by the Health Minister on 12 October 2022 [MMcB7/078 – INQ000503802, see MMcB7/072 – INQ000503803, see MMcB7/071 – INQ000503807 and MMcB7/079 – INQ000503808]. One key change in the updated MoU was to reflect revised financial funding arrangements, effective from the start of 2022/23 financial year between the DAs and UKHSA in relation to the NTP. In summary, rather than NI and the other DAs receiving a Barnett (population based) share of testing capacity procured by UKHSA as part of a UK-wide programme, DAs including NI could advise UKHSA of specific requirements in line with each nation's policy requirements. The cost of such services - beyond those which were funded on a UK-wide basis in 2022/23 (one example funded on a UK-wide basis was the decommissioning of Pillar 2 test sites) - were then reimbursed by the Department in NI directly to UKHSA. The reimbursement amount was accounted for by UKHSA as part of its financial reconciliation processes and resulting BCTs. There was no change to procurement and contract management of services, all of which continued under the NTP to be undertaken by UKHSA in the same manner as before.

238. One example of a NI specific requirement under these new arrangements, was when the Department requested that UKHSA extend the Pillar 2 contract with the local Lighthouse Laboratory contractor on behalf of NI; initially from 1 April 2022 – 30 June 2022. At the end of March 2022, the future pandemic trajectory remained uncertain, and the Department opted to retain access to this Pillar 2 capacity for this period as the preferred contingency option should prevalence increase, and increased PCR

testing be required. The contract extension was on a 'minimum volume' basis and, as demand for PCR was uncertain, this contract structure posed a clear element of financial risk should demand for testing not meet those minimum contracted volumes. As it transpired, during the extension period testing demand did not meet the minimum thresholds set out in the contract which meant that some of that financial risk exposure was realised. The Department monitored PCR usage and subsequently opted to terminate the contract early during this period which to some extent limited the exposure. All contract negotiations and oversight of laboratory services direct with the Lighthouse Laboratory contractor in relation to this extension period continued under the NTP, undertaken by UKHSA in the same manner as before, acting on behalf of the Department [MMcB7/080 – - INQ000552981, MMcB7/081 - - INQ000531573, MMcB7/082 - - INQ000531574, MMcB7/083 - - INQ000531575 and MMcB7/084 - - INQ000531576]. Another specific NI requirement to support the Test & Trace Transition Plan in NI was the retention of Mobile Testing Units for a period beyond the end of March 2022 to support contingency planning.

239. Funding for the Pharmacy Collect service was provided under the NTP arrangements up until March 2022 when the NTP Pharmacy Collect contract was removed. From April 2022, the Pharmacy Collect service in NI was funded directly by the Department. The Pharmacy Collect service continues to operate under business-as-usual arrangements to facilitate the distribution and collection of free LFD tests to those who remain eligible for Covid-19 testing in NI.

240. Separate to the DHSC/UKHSA managed national contracts as part of the NTP, the BSO locally managed the contract for the Seegene PCR platforms used in Pillar 1 laboratories. The Seegene assay was used to varying degrees across the five HSC Trusts in NI, however it was mostly used as a contingency to the Roche testing platform in Pillar 1 laboratories except for one HSC Trust where it was the primary assay. Funding for procurement of the Seegene assay by BSO was made available by the Department as part of general funding arrangements to support delivery of HSC laboratory services.

HSC Pillar 1 PCR Capacity and New Testing Technologies

241. Pillar 1 PCR test sites were in place in each of the HSC Trusts. Pillar 1 sites were used primarily to provide testing to support clinical and in-hospital pathways and in the management of outbreaks in care homes. In January 2020, the baseline PCR capacity was 40 tests per day at the RVL. In addition to this HSC capacity, NI has well established relationships with the Public Health Laboratory network in the UK for specialised testing which is not available locally.

242. The highest reported Pillar 1 capacity, as of 15 July 2022, was up to 5,368 tests per day (which included PCR and testing technologies such as LumiraDX). The NI Pathology Network produced a weekly Pillar 1 Capacity Report for EAG-T, which was also shared with myself and the Health Minister [MMcB7/085 – INQ000530960].

PCR Capacity Scale-up

243. Starting from this baseline capacity position, the Department worked at considerable pace with a number of partners to rapidly scale up testing capacity available in NI. This was delivered through two routes - firstly, expansion through the existing NI HSC laboratory network (*Pillar 1)*, secondly, as described in detail in paragraphs 209 - 214 above, through NI participation in the NTP (*Pillar 2*) and access to the PCR Lighthouse Laboratory Network.

244. The Department's EAG-T [see MMcB7/023 – INQ000137354] played a significant role in advising on and in working with partners to deliver the expansion of PCR testing capacity in HSC Trust services as quickly as possible. The EAG-T worked closely with the NI Pathology Network to explore all available options to increase laboratory testing capacity within Pillar 1.

245. In March 2020, at my request, the Department established an academic consortium to assist in increasing local PCR testing capacity. The academic consortium (known as the Covid-19 Scientific Advisory Consortium) involved the Queen's University Belfast (QUB), the University of Ulster (UU), the Western HSC Trust's Clinical Translational Research and Innovation Centre, the AFBI laboratory (a government laboratory

sponsored by the Department of Agriculture Environment and Rural Affairs (DAERA)) and the Almac Group [MMcB7/086 -INQ000530961 and MMcB7/087 - INQ000503827], a commercial laboratory partner. Agreement for AFBI to undertake testing was established between the Health Minister and the DAERA Minister [MMcB7/088 – INQ000439346, MMcB7/089 – INQ000530962 and MMcB7/090 - ' – INQ000467709]. The Consortium was an important factor in increasing Pillar 1 PCR testing capacity, in helping to diversify testing platforms used and to build access to resilient HSC capacity. The Consortium partners worked closely with the EAG-T and in particular with scientists in the RVL to operationalise testing arrangements including validation of testing platforms and to build data sharing arrangements. Testing commenced at AFBI on 21 May 2020 and later at Almac on 26 August 2020. Progress regarding the set up and operationalisation of the additional PCR testing capacity through the Consortium was a regular agenda item at the EAG-T meetings. The contracting arrangements with both AFBI and Almac were put in place by the Belfast HSC Trust, where the RVL was located, and were extended a number of times at the request of the Department, taking account of community prevalence and the continuing need for rapid access to additional contingency PCR capacity. Funding to support testing at Almac was provided by the Department of Health. Funding to support testing at AFBI was provided by the Department of Health and DAERA.

246. As previously described, a key challenge to scale up testing capacity early in the pandemic in particular was global supply chain challenges in relation to the availability of reagents and other consumables. This was a shared challenge across the UK, the RoI and internationally.

247. The Department considers that in general the level of cooperation and joint working with partners to scale-up PCR capacity in Pillar 1 laboratories was very effective and operated at a consistently high level. There was no particular collaboration with the RoI with regard to the development of testing capacity. This was in large part due to NI's participation in the UK-wide National Testing Programme. There was a particular dependence in Pillar 1 NI HSC laboratories on the Roche testing platform which, due to a national allocation restriction, presented some unique challenges for NI. This is described further at paragraph 225 above.

New Testing Technologies used in Pillar 1

248. In October 2020 I asked the NI Pathology Network to take the lead role in the coordination of the deployment of the new rapid Covid-19 testing technologies determined to be appropriate for use in Pillar 1. The NI Pathology Network produced its Covid-19 Pandemic Response Report (April 2021) which set out considerable efforts across the Pillar 1 network to expand capacity. [MMcB7/091 – **INQ000377249**

249. The NI Pathology Network set up a subgroup (the Pathology Network Covid-19 Testing Group) to support regional planning and coordination of the expansion of testing in HSC Laboratories, working with and reporting progress to the EAG-T. This subgroup comprised leadership from a number of stakeholders, including leads from the existing Microbiology, Virology and Point of Care Specialty Fora, commissioners, public health leads, BSO Information Technology Services, Belfast HSC Trust Laboratory IT leads who supported work on data and connectivity, and BSO Procurement & Logistics Service (PaLS) who provided input on contracting, procurement and logistics. Members of the subgroup also represented NI on relevant UK-wide expert groups which helped ensure that NI was guided by and appropriately taking account of national developments.

250. These new technologies offered non laboratory based, point of care testing which was an important factor in increasing testing capacity and were utilised across a range of settings in the hospital network. For example, in a statement made on 13 January 2021 [MMcB7/092 - INQ000276616], the Department announced that a new rapid test for Covid-19 would be rolled out to all HSC Trusts' Emergency Departments across NI. The LumiraDX test permitted medical staff to identify more quickly that a patient did not have the virus, and so improved patient flow in the Emergency Department and the wider hospital system. Further pilots were then carried out in Northern Ireland for use in maternity settings and to test patients suitable for discharge, with expansion in these and other settings from April 2021. The new technologies were used only in specific use cases and under specific circumstances in line with manufacturers' instructions, and only as agreed by the NI Pathology Network and EAG-T.

251. The primary new testing technologies used in NI hospital sites were:

i. LumiraDX SARS-CoV2 (LFD) antigen test, a rapid 12-minute point of care test that detects the protein antigen of SARS-CoV2;

ii. LIAT - The SARS-CoV-2 & Influenza A/B test, a multiplex real-time PCR test that detects and differentiates SARS-CoV-2, influenza A and influenza B in 20 minutes from a single nasal sample and in just one test; and

iii. The SAMBA II platform is equivalent to a PCR platform and is designed to specifically detect the presence of the SARS-CoV-2 virus, in nose and throat swab samples run on the SAMBA II instrument.

252. Other new testing technologies validated and procured via the NTP – such as DNA Nudge, Primer Design and ABBOTT ID-NOW – were explored locally by the NI Pathology Network including RVL for use but deemed as not appropriate for adoption in NI. This was due to technical issues for example connectivity issues with software used in HSC Trust Laboratories, concerns regarding robustness of the platforms, and scalability due to training requirements/staffing required.

Rollout and Expansion of Test Sites

Pillar 2 PCR Sites

253. The first testing centre in NI established as part of the NTP was opened at the SSE Arena in Belfast on 4 April 2020. A second centre opened in the City of Derry Rugby Club on 17 April 2020; a third in Craigavon on 23 April 2020; a fourth in Enniskillen at St Angelo Airfield on 28 May 2020; and a fifth in Antrim at Antrim Business Park on 21 January 2021. Capacity in this early phase was up to 400 tests per day at each site. Capacity was initially prioritised for health and social care staff and other keyworkers and, from 18 May 2020, was widened to provide symptomatic testing to the general public.

254. The number of test sites and facilities available in NI through the NTP would continue to grow and at its peak there were five Regional Test Sites (RTSs), ten local walk-in

sites (LTSs) in operation, and access to sixteen Mobile Testing Units (MTUs) with an additional one in reserve. Details regarding the location of all test sites was made publicly available on the PHA website and on the NI Direct website which were updated regularly during the pandemic, including access and booking arrangements and, where relevant, specific detail relevant to each site was also available. The NI Direct website was a key source of advice and guidance for the public over the course of the pandemic.

255. Home Test Kits were also available for people who are unable to attend a test site, which greatly assisted access to testing for those who needed it but were unable to travel to a test site (see also paragraph 378). A *Satellite Testing Channel* also operated as part of the NTP to provide PCR testing kits to support the regular programme of testing in care homes.

Selection of Site Locations

256. Operational delivery of the NTP in NI was managed under contracts put in place by DHSC / UKHSA and the PHA worked closely with DHSC / UKHSA to manage and oversee operational delivery, and on the planned rollout and expansion of the test sites network. This included the lead PHA official role in NI working with DHSC / UKHSA on the identification of suitable location of sites. Site identification and selection was considered by the PHA with a core public health lens and included consideration for example of how best to optimise access for the whole population and how best to mitigate inequalities in access and accessibility. The Chair of the Department's EAG-T was also a Deputy Director in the PHA and played a lead role in this work with her team in PHA. The PHA is likely best placed to assist the Inquiry further with regard to the detail of how test sites were identified and agreed, including how site locations were prioritised and why, and how any inequalities were identified and how these were mitigated. The Department received regular updates with regards to the expanding footprint of Pillar 2 test sites. Updates on the expansion of testing capacity were also provided by the Department to the NI Executive by the Health Minister.

257. The Department understands that DHSC / UKHSA and the PHA led engagement with local government regarding the rollout of test sites and is likely best placed to assist

the Inquiry further in this regard. In the spring of 2020, the Infrastructure Minister made some Driver and Vehicle Agency test centres available for use as Covid-19 test sites under the NTP [MMcB7/093 – INQ000114499]. At that stage in the pandemic, NTP test sites were used for testing of healthcare workers only and testing was arranged via the PHA and the relevant HSC Trust. HSC Trusts also established some testing sites on HSC Trust premises to arrange testing of healthcare staff using Pillar 1 laboratories. The Emergency Preparedness Group did not have a role in the roll out of test sites.

258. Utilising data from NTP systems, the PHA closely monitored available testing capacity and uptake of testing on a daily basis across the region and worked to optimise available capacity at test sites and to manage population need and accessibility [MMcB7/094 – INQ000530964].

259. MTUs were an important tactical asset during the pandemic response. The location of MTUs was kept under continuous review by the PHA who moved location of Units based on local need for example to support outbreak testing, to target areas of high prevalence and/or stubbornly high prevalence, and to enable enhanced testing in response to concerns about the emergence of a new variant of Covid-19.

260. Based on ongoing monitoring of surveillance data and intelligence, the PHA also led on interventions in particular settings or sectors where case numbers were higher than expected. This included for example working with local churches to support safe practice with funerals and in some other locations following particular events and specific gatherings. This also included the operational management and delivery of enhanced testing to support outbreak management. For example, following the identification of the Delta variant in Kilkeel and Omagh, in July 2021 the PHA deployed a number of interventions to help reduce the spread of the virus within the local areas including enhanced LFD and PCR testing [MMcB7/095 – INQ000382994].

Overview of PCR Test Site Locations

261. The table below sets out the test site locations for RTSs and LTSs at January 2022 and the daily capacity. The table also lists the number of MTUs available to NI and the

daily testing capacity at each, however not the location which was changeable. A detailed and complete contemporaneous record of how the portfolio of Pillar 2 sites evolved and expanded in NI throughout the pandemic, including dates that sites opened and all locations for MTUs, is not held by the Department. A composite analysis of how Pillar 2 sites were selected and how these changed over the course of the relevant period may be held by the PHA. The PHA as the operational lead worked closely with the NTP Programme – including with the test-site service operator (SERCO) and with UKHSA - and will likely be best placed to assist the Inquiry with key issues in the delivery of test sites across NI and how these were addressed. The Department had no direct role in the identification and operational oversight of test sites. The Department was updated by the PHA as necessary of any significant issues including for example any matters that had potential to attract media attention.

Figure 1 - Test Site Locations and the Daily Capacity - January 2022

Site	Daily Booking Capacity
RTS Belfast	1224
RTS Derry	1020
RTS Craigavon	1020
RTS Enniskillen	765
RTS Antrim	1224
LTS Belfast	288
LTS Derry/ Londonderry	288
LTS Coleraine	288
LTS Old Ballymena	-
LTS Lisburn	288
LTS Belfast	144
LTS Newry	288
LTS Omagh	288
LTS Ballymoney	144
LTS Downpatrick	144
MTU 1009	500
MTU 1021	500

MTU 1029	500
MTU 1052	500
MTU 1059	500
MTU 1084	500
MTU 1111	500
MTU 1112	500
MTU 1217	500
MTU 1218	500
MTU 1246	500
MTU 1296	500
MTU 1312	500
MTU 1405	500
MTU 1439	500
MTU 1472	500
Strategic Reserve	-

Cooperation

262. While it was DHSC/ UKHSA and the PHA that led on the detailed discussion and negotiation with partners with regard to the roll out of test sites and as such are best placed to comment on cooperation in that regard, the Department's observation is that the level and consistency of cooperation to support roll out and delivery of Pillar 2 testing was generally effective and constructive.

Prioritisation of Testing Capacity

263. The NI Covid-19 Testing Strategy was supported by an Interim Protocol for Testing (IPT) for Covid-19. The purpose of the IPT was to set out how available testing capacity, which expanded over time, was to be prioritised for use. The IPT was an operational tool which provided information on eligibility for testing and advice on how to access testing.

264. As previously described, the Department established a protocol early in the first wave of the pandemic to guide the targeted and prioritised use of available Covid-19 testing,

with the first version of the IPT dated 19 March 2020 [see MMcB7/055 – INQ000120705]. At this time only PCR testing was available (there was no LFD testing). PCR testing capacity was constrained early in the pandemic which meant from Version 1 of the IPT, testing was primarily targeted at protecting the sickest individuals requiring inpatient care and those caring for them, and in the management of outbreaks for example in care homes (see paragraphs 148 and 149 above).

Updates to the Prioritisation of Testing Capacity

265. The IPT was kept under continuous review by the Department with priority groups for testing extended regularly in line with emerging scientific, clinical and public health evidence and with expansions in testing capacity. As such, there were many changes to the priority groups identified for testing throughout the pandemic. A list of key changes to these groups as the IPT was updated is set out at paragraph 617.

266. The prioritisation set out in the IPTs took account of wider advice, evidence and best practice recommendations from a wide range of clinical, scientific and public health advisory forums, including for example SAGE, 4 UK CMOs meetings, UK Senior Clinicians and others. The IPTs also took account of policy developments in the other UK nations and in the RoI.

267. Following its establishment, one of the key roles of the EAG-T was to make recommendations for updates and amendments to the IPT taking account of this wider evidence base. Draft IPTs included input where appropriate from the CSA and final drafts were endorsed by EAG-T and the Deputy Chief Medical Officer. IPTs were then submitted by the Covid-19 Response Directorate to myself for consideration and final approval before issue.

268. There were 10 IPTs issued in total during the Module 7 relevant period. Subsequently, the *Covid-19 Testing Guidance to Support Clinical Pathways* guidance document replaced the IPT format, only one of which issued in the Module 7 period, in May 2022. Further information on these and relevant exhibits is elsewhere in this statement.

269. As with testing programmes across all 4 UK nations, testing strategies and protocols in NI evolved as new technologies became available and as evidence emerged on the potential uses. Updates to the IPT took account of opportunities presented by these new testing technologies. As such, a range of testing technologies were used including PCR, LFDs, LAMP and Lumira DX, after careful consideration and as deemed appropriate across different settings.

Provision of Lateral Flow Devices

Early Consideration of the Use of LFDs

270. Departmental officials provided the Health Minister with a submission dated 31 August 2020 setting out early DHSC-led plans for regular whole population asymptomatic Covid-19 testing in England using new testing technologies, including LFDs. The submission also confirmed that senior healthcare staff from NI continued to link at that time with emerging UK-wide project structures [MMcB7/096 – INQ000530965 and MMcB7/097 - INQ000530966].

271. The Health Minister wrote to his counterpart at the time in England (Matt Hancock, then DHSC Secretary of State) on 18 November 2020 requesting circa 4 million LFD tests for NI to enable testing at population level [MMcB7/098 – **INQ000304295**. A reply from Mr Hancock was received on 26 November 2020 agreeing to that request. [Exhibit MMcB7/099 – INQ000530968].

272. Under the direction and guidance of the Department's EAG-T, a small number of pilot exercises using LFDs first commenced in NI to test university students in December 2020, and subsequently a pilot to test older secondary school students (in sixth and seventh year) and teachers in a small number of schools commenced in December 2020 involving close joint working between the PHA and the Education Authority (EA). [MMcB7/100 – **INQ000467709** and MMcB7/101 - INQ000439437]. These pilots operated under the auspices of the NTP managed by DHSC, with local oversight from and reporting of progress to the Department's EAG-T. A key focus of these early pilots was to better understand how best to use the new LFD technology at scale and to help consider how these could have most beneficial impact.

273. In October 2020, Departmental officials were beginning to develop links with colleagues in other Departments, for example in the Department of Education (DE) and the Department for the Economy (DfE), to consider how best to progress plans for further pilot opportunities.

274. On 30 November 2020, I convened a small working group to inform ongoing considerations regarding how best NI could avail of the emerging LFD technology. The group comprised DCMO, CSA, the Chair of EAG-T and QUB colleagues who were also members of SIG and myself. Discussions considered early emerging learning from mass testing pilots in England, Wales and Slovakia [MMcB7/102 – INQ000530970, MMcB7/103 - INQ000530971, MMcB7/104 - INQ000530972, MMcB7/105 – INQ000530975, MMcB7/106 - INQ000530976, MMcB7/107 - INQ000223465 MMcB7/108 - INQ000530978 and MMcB7/109 - INQ000530980]. These discussions helped shape the priorities for the emerging NI SMART programme (described in paragraphs 276 to 282).

275. From December 2020, the Department worked with a range of partners to deliver an expansion of the availability of a regular programme of asymptomatic Covid-19 testing across a range of different sectors including university students (working for example with Queens University Belfast and Ulster University), hauliers travelling to France, and later visitors to Care Homes (in conjunction with the PHA) and across a range of health and care settings. The work to establish testing for hauliers transporting essential goods [see MMcB7/030 – INQ000381443, MMcB7/110 - INQ000530981 and MMcB7/111 – INQ000375891] was a good example of cross sectoral collaborative working. This involved cross government and public sector working between the Department, PHA and the Department for Infrastructure and DAERA in Northern Ireland and with the Departments for Health and Transport in Whitehall. This also involved working with haulage sector representatives here in Northern Ireland, and with Queens University and Ulster University who both made LFD test sites in place across university campuses available to hauliers in Northern Ireland.

Early Prioritisation and Managed Expansion of LFD Testing

276. With the agreement of the Health Minister, I established a NI SMART (Systematic, Meaningful, Asymptomatic, Repeated Testing) programme on behalf of the Department to oversee all aspects of the introduction of community testing using LFDs. I chaired the NI SMART Programme Board and was assisted by a small administrative team.

277. The Health Minister presented a paper to the NI Executive [see MMcB7/111 – INQ000375891] at its meeting on 11 February 2021 regarding the planned expansion of asymptomatic testing. Areas for priority focus of testing included targeting testing in higher prevalence local council areas, National Critical Infrastructure sectors and Emergency Services, and expansion into private industry commencing with a pilot in a local agri-food business.

278. On the basis of the available evidence on infections in the workplace at that time in NI and taking account of emerging learning from across the UK and internationally, the following four sectors were prioritised for the first phase of the workplace testing programme: Agri-food; Manufacturing; Essential Retail; and Construction. The programme recommended regular (twice weekly) asymptomatic workforce testing. The Department continuously highlighted the importance of uploading the test results to help track prevalence, outbreaks and changes in epidemiology. The Department launched the Covid-19 workplace testing programme on 10 March 2021 as part of the targeted expansion of asymptomatic testing [MMcB7/112 – INQ000530983, MMcB7/113 – INQ000377266 , MMcB7/114 – INQ000137362 , MMcB7/115 – INQ000530986 and MMcB7/116 – INQ000276617].

279. The programme aimed to benefit employers and society as a whole as it was designed to help keep community infection rates down across NI and to protect those providing and using services. As previously explained, the policy intent when LFDs first emerged was to use the tests as an additional 'test to find' measure as part of regular asymptomatic testing, and testing was recommended for use only in addition to other public health guidance and measures in place. It also aimed to provide additional assurance to employers, staff and the general public and to help boost confidence in

those working in and those using services as society gradually reopened. The initial employers to use the programme were Translink (NI's public transport operator) and the NI Fire and Rescue Service.

280. DCMO Professor Lourda Geoghegan and the NI SMART Programme Director attended the NI Executive on 22 April 2021 with the CSA and I to provide Ministers with an update briefing regarding the expansion of the NI SMART programme and testing priorities [MMcB7/117 – INQ000375893].

281. The NI SMART programme expansion continued to progress at pace. The programme was extended in early April 2021, from employers in designated sectors with more than 50 employees who could not work from home, to all private sector employers with more than 50 employees who could not work from home. It was further extended in late-April 2021 to all organisations with 10 or more employees or volunteers, who could not work from home. Some larger businesses were enabled to set up and run Assisted Testing Sites (ATSs), to oversee the workforce testing and to upload the results. Smaller businesses were able to access tests for distribution to their employees to conduct the tests at home, while managed within the parameters of the employer organisation's workforce testing policy.

Distribution of LFDs and Test Sites

282. The NI SMART programme continued to work throughout 2021 with DHSC / UKHSA and with a range of local partners and businesses to expand the LFD asymptomatic testing offer and the channels through which citizens could obtain LFDs, and to highlight the expanding availability of tests [MMcB7/118 - INQ000383325]. A high-level summary of these channels is set out below:

i. The Department worked with Local Councils and third sector organisations to expand the availability of community ATSs and community LFD Collect Sites at a wide range of locations across the region including some to serve more rural communities. Ten out of the 11 Local Councils established collection sites, with a total of 39 collect sites available for both staff, the public and wider community groups including those supporting vulnerable and marginalised groups. A key factor in agreeing sites was

seeking to optimise accessibility for local populations and using sites that had recognised higher levels of footfall for example Local Council-run leisure centres. With the emergence of the LFD home ordering service in April 2021, the number of manned ATSs reduced given the relative cost and complexity of setting up and maintaining an ATS. From April 2021, the collection of LFDs was also available from the network of local Pillar 2 PCR testing sites;

ii. At its peak, the Workplace Testing scheme overseen by the NI SMART programme working through UKHSA had a total of 479 registered businesses and organisations from across NI providing test kits to staff. This included a diverse range of both public and private sector businesses and organisations including from agri-food, utilities, education and training, childcare, construction, transport including local airports to aid those travelling, community and voluntary sector, retail, hospitality and manufacturing. This also included various groups and organisations supporting vulnerable and marginalised groups including for example groups supporting people with mental health needs; autism and learning disability needs; addiction services; women's aid and other women's support groups; cancer care; and organisations supporting those who were homeless and supporting refugees;

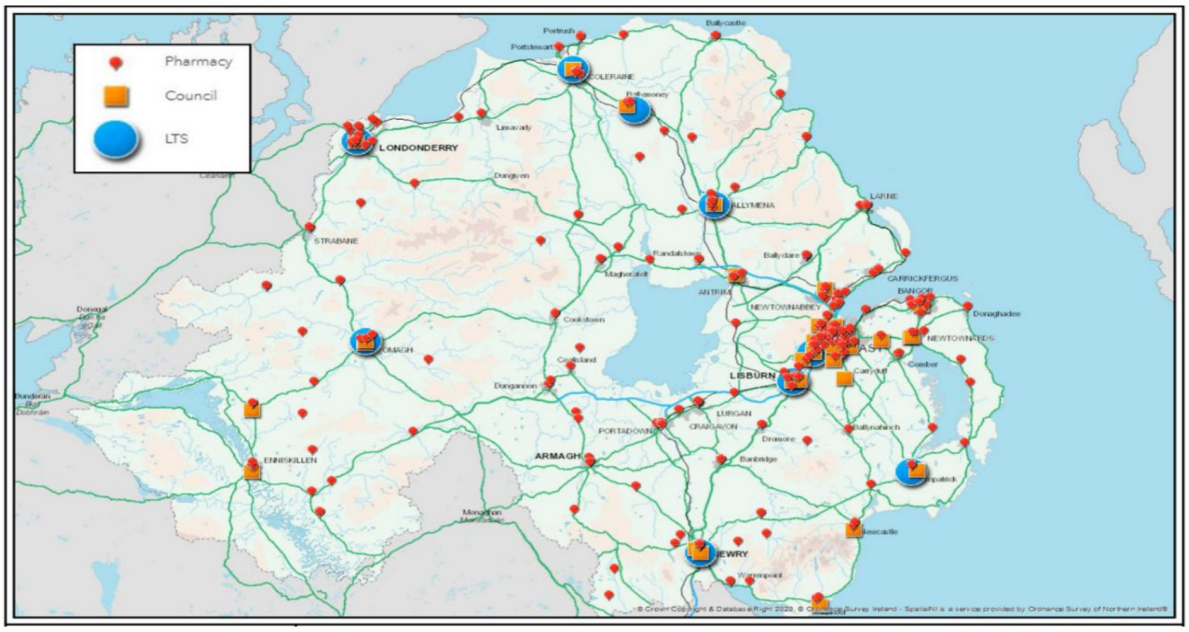
iii. An *NHS Test and Trace 'Site finder'* website was established as an online tool for the public to use, enabling them to search and locate the nearest collection point for LFD tests. To find the nearest collection point, the user entered their town or postcode, and nearby collection points would be listed. The site was highlighted in Departmental communications and was also available on the NI Direct website;

iv. On the 19 April 2021, the Health Minister approved the extension of the UK free LFD home ordering service to NI. This was at the time often referred to as the *Universal Offer* and enabled people to order free LFD tests online and via the 119 national number to be delivered to their home [MMcB7/119 – INQ000530988]. This greatly expanded accessibility and equity of access to free LFD tests for the NI population; and

v. A new Pharmacy Collect service was launched in NI on 1 September 2021 [MMcB7/120 – INQ000383070]. At its peak there were 515 participating community

pharmacies across NI which again greatly expanded access to free LFD tests including for vulnerable groups and for those living in rural communities. Figure 2 below shows the geographical spread of participating pharmacies at September 2021.

Figure 2 - Pharmacy Collect Locations - September 2021



Cooperation and Joint Working

283. As described above, the operational expansion of asymptomatic LFD testing in NI required the Department to work in close partnership with a broad range of local partners including a number of government Departments – including DfC, DfE, and DAERA - Local Councils, other public sector agencies, and a range of business sectors. At times, this also included by necessity, given the respective role and responsibilities of Ministers and Departments, joint working and announcements at Ministerial level.

284. The NI SMART asymptomatic testing programme was fully integrated with the UK NTP and the NI SMART team worked closely with DHSC / UKHSA. All LFDs used in NI as part of the NI SMART programme were procured and supplied under the NTP. A practical example of this joint working was the NI SMART team's work with UKHSA to

monitor the stock levels of LFDs, and diversification of LFD type in the stockpile, available to NI. This was done through the Testing Supply and Demand Management meetings chaired by UKHSA and attended by officials from each UK nation and underpinned by detailed supply and stock data compiled and maintained by DHSC/UKHSA. This joint working helped ensure that there was consistency of supply available to NI for businesses and citizens and across all other sectors where testing was recommended. NI SMART also benefited greatly from national resources including for example test site operating procedures, training and signage and delivery and distribution logistics.

285. The NI SMART team also worked closely with the BSO locally who assisted with storage and distribution of LFDs under its existing contracts and service delivery models; including to manage delivery of LFDs to HSC Trusts to support staff and clinical testing and, at times, to assist in replenishing pharmacies.

Reporting of Covid-19 Test Results Data

286. Under the NTP, UKHSA established reporting systems to ensure that the results of PCR and LFD tests were communicated by SMS text message or email promptly to the individual who had taken the test and to the PHA via the BSO. Data sharing arrangements were provided for in the relevant Schedules to the NTP MoU. These results reporting systems supported tests taken regardless of the delivery channels – for example, in-person test sites, home ordering etc.

287. For tests undertaken in Pillar 1 laboratories using PCR and using the new testing technologies as these came on board, data flows were established by BSO working with the NI Pathology Network. Data flows were established by BSO from the end of May 2020 building on work previously undertaken by the NI Pathology Network with Pillar 1 stakeholders to agree a regional Covid-19 testing dataset. Pillar 1 data flows were integrated with existing HSC laboratory information systems which were in place before the pandemic.

288. From early 2021 when the use of LFDs emerged at scale, individuals taking LFD tests at home were strongly advised by the Department of the need to report their test result

using the NTP online portal at *gov.uk/report-covid19-result*. In addition to the option to report test results online, citizens were able to report test results using a non-digital route via the 119 national telephone number. The option to report the LFD test result using the 119 number was explained in the LFD Instructions for Use, which were included in each LFD pack, and in communications issued by the NI SMART team locally. Individuals taking the test were strongly advised to report the result regardless of the test result (positive, negative or void). Communications regarding the need to report all results were issued by the Department [see MMcB7/075 – INQ000383175] and the PHA via numerous press releases and public campaigns, and on the NI Direct website. Instructions on how and where to report the test result were also included within each LFD test pack. Under the Workplace Testing Programme, participating organisations had access to the online workplace testing portal which provided digital solutions covering user registration, results reporting, and organisations had access to Standard Operating Procedures and training. Again, all participating organisations were strongly encouraged to report all results.

Evolution of Collection and Collation of Test Results Data

289. From March 2020, Covid-19 test results were available for Pillar 1 laboratories only, with data provided by secure electronic transfer to both the Department's Information and Analysis Directorate (IAD) and to the PHA from HSC Trust laboratory systems. This manual exercise was labour intensive and time consuming, as considerable time and effort was required each day to identify duplicate records, an issue which was compounded by data quality control issues. Data was analysed and processed by IAD and published on a daily basis on a Public Facing Covid-19 Dashboard.

290. From June 2020, Covid-19 test results for both Pillar 1 and Pillar 2 were received in twice daily batches by BSO and loaded into two separate data universes in the BSO Data Warehouse, accessible to both the PHA and the IAD. The PHA used this data to monitor a range of indicators including infection rates, and data was also made available to the PHA's Contact Tracing Service for appropriate action. As the Covid-19 test results were held in two separate data universes, the IAD had to download tests for each Pillar separately, before creating a single merged dataset for Covid-19 test results. This continued to require considerable time and effort each day to identify

duplicate records. The IAD continued to publish updated data on the Public Facing Covid-19 Dashboard at 2pm each day.

291. The establishment of a single Central Test Results registry for Pillar 1 and 2 results by the BSO in October 2020 led to improvements in both data quality and the time taken to cleanse / analyse data on a daily basis. The Department's Digital Health & Care Directorate (DHCNI) commissioned the BSO to create and maintain the Central Test Results registry to hold Covid-19 test results for NI citizens reported across all testing platforms (including Pillar 1, Pillar 2 – including both PCR and LFD - and antibody testing sometimes referred to as Pillar 3). This feed was updated 24 hours a day. The results were drawn from, and fed to, different sources and systems as illustrated in the data flow diagram [MMcB7/121 – - INQ000531577]. Positive Covid-19 test data contained within the test registry fed into the PHA including the contact tracing system.

Data Sharing by the Department of Health

292. The dissemination of data to inform decision-making within the Department, and indeed across the wider NI Executive and Government Departments was vital. The Department announced the release of the new Covid-19 Public Information Dashboard for NI on 19 April 2020 [an example of the Dashboard, which was updated daily, is presented atMMcB7/122 – INQ000130401].

293. This made data publicly available to decision makers, HSC staff, the media, analysts, other Government Departments including TEO, and to the public. The Dashboard was key to data transparency and engaging with the public on planned public health interventions, by providing the data used to support decision-making, and sharing evidence of the impacts of those interventions. It provided a common data set which included a wide range of data in relation to testing and other key datasets for example:

i. the number of individuals testing positive;
ii. the rate of individuals testing positive per 100K population;
iii. the total number of individuals tested by Local Government District;

iv. information provided from PHA about numbers of outbreaks in care homes and the extent of outbreaks;

v. Intensive Care Unit bed occupancy and availability;

vi. Hospital Bed Occupancy data for Covid-confirmed and non-confirmed patients to help assess pressure on hospital services; and

vii. the number of deaths reported by HSC Trusts that were associated with Covid-19.

294. Additional information and analysis were added to the Dashboard as the pandemic response evolved and better quality data became available. For example, the Department announced on 3 September 2020 that the Dashboard would provide additional information on testing data including providing a breakdown of the number of individuals testing positive during the last seven days by Local Government District and age bands.

295. A further development to the Dashboard was introduced on 31 January 2022, which involved moving all Covid-19 cases reporting to use a new episode-based definition which included possible reinfections. Reinfections had previously been included in daily updates of new Covid-19 cases but reinfections were only counted once in cumulative totals. As the pandemic continued and more variants emerged, it was more likely that people would be reinfected with Covid-19. UK public health agencies were therefore updating surveillance data to count infection episodes, including reinfection episodes.

296. The practice of releasing further comprehensive data was aimed at raising public awareness and informing NI's response to the virus. By consolidating information from across the HSC, the Dashboard provided an accurate view of the metrics needed to track and understand the spread of the virus, and the capacity in the healthcare system to deal with it. Common definitions and presentation of information were adopted to permit comparison across the UK four nations and to enable UK wide reporting. The Department also shared testing data with the DHSC for inclusion in UK national press releases and the UK Covid-19 Dashboard.

297. The Department's Covid-19 Dashboard was managed by the Departmental statisticians and was continuously reviewed and developed. Several systems and processes were developed and utilised by the Department to collate the relevant data for this Dashboard. In line with NI Civil Service policy and practice, the Dashboard was produced to the requirements of the pillars of the Code of Practice for Statistics February 2018 edition in terms of trustworthiness, quality and value.

298. Early in the pandemic, information in relation to testing volumes was provided in the PHA Daily Bulletin [Exhibit MMcB7/123 – INQ000130404]. This PHA reporting was stood down as the Department's Dashboard was established. The PHA continued to produce a range of public updates and reports including data on the operation of the Contact Tracing Service and data on clusters and outbreaks including those in care homes; which were also presented at NI Executive meetings

Sector Testing

Healthcare Workers

299. In the context of limited testing capacity early on in the pandemic, the Department acknowledged the need to support testing of symptomatic healthcare workers under certain conditions. Healthcare workers prioritised for testing in the IPT Version 1 (issued 19 March 2020) [see MMcB7/055 – INQ000120705] included those who were providing frontline patient facing clinical care. As described at paragraph 265 above, the IPT was kept under continuous review with priority groups for testing extended regularly – including expanded prioritisation of testing of healthcare staff - in line with emerging scientific evidence and with expansions in testing capacity.

300. Whilst a regular programme of asymptomatic testing for healthcare workers using LFDs was not in place until 2021 (see paragraphs 303 to 306 below) there was some asymptomatic PCR testing of patient facing staff prioritised in certain discrete areas in 2020. This included:

i. Version 6.1 the Interim Protocol for Testing dated 23 July 2020 [MMcB7/124 – INQ000469795] included the requirement for regular testing of staff working in

specialities with vulnerable patients (for example, oncology and haematology) with staff tested regularly if there was evidence of nosocomial spread of infection in the unit; and

ii. Regular testing was also advised for staff working in any clinical setting where there was evidence of nosocomial infection.

301. A Healthcare Worker Testing Group chaired by the PHA was established in December 2020 to oversee the rollout of asymptomatic testing for healthcare workers using LAMP and LFDs. The Group comprised HSC Trusts, BSO from the perspective of logistics and data connectivity, representation from the Department's testing policy team, and linking with the NI SMART as needed in relation to LFD supplies. The purpose of the PHA-led group was to support HSC Trusts to roll-out and scale-up local HSC Trust-led healthcare worker testing programmes. The Group kept the Department's EAG-T updated with progress.

302. Testing of asymptomatic staff in the Belfast HSC Trust using the new LAMP technology started in December 2020 [MMcB7/125 – INQ000408167]. Testing initially commenced as a pilot with 260 registered participants. Testing was delivered through joint working by the PHA with the Belfast HSC Trust and QUB Belfast. Following the pilot, the LAMP programme was rolled out in the Belfast HSC Trust and later in the Western HSC Trust (partnering with the University of Ulster), with various logistical and operational issues addressed on an ongoing basis. Progress was reported to the EAG-T. Further details if required to assist the Inquiry may best be provided by the PHA and relevant HSC Trusts.

303. Asymptomatic testing of healthcare workers using LFDs first commenced as a pilot exercise in the Southern HSC Trust on 22 January 2021, followed by the Northern HSC Trust during week commencing 25 January 2021 [MMcB7/126 – INQ000325585].

304. A recommendation was made to the Department by the EAG-T on 12 March 2021 to stop the pilot testing and to implement a full rollout of the asymptomatic testing programme of patient-facing staff. On 16 March 2021, an email was sent by the PHA to all HSC Trusts advising the Department had requested that scaling up of testing

should now proceed [MMcB7/127 – INQ000530989]. The communication explained to HSC Trusts that MHRA had agreed to a PHA proposal to remove the requirement for face-to-face supervision of the first test; agreeing instead that the healthcare worker could watch a training video and read the test Instructions for Use, then begin testing. This revised model was deemed helpful to assist more rapid scale up. The PHA communication also asked HSC Trusts to prepare revised testing scale up plans taking account of the agreed approach with MHRA. The Healthcare Worker Testing group continued to meet regularly and kept the EAG-T updated with progress. In an effort to boost rapid expansion of testing, I wrote on 4 June 2021 to HSC Trust Chief Executives to request that HSC Trusts develop robust preparations and plans for a significant expansion of regular asymptomatic testing of patient-facing staff in all programmes of care [MMcB7/128 – INQ000377271]. This correspondence set out an expectation that in due course the programme of regular asymptomatic testing should reach a minimum of 80% of all patient facing staff.

305. The asymptomatic testing programme for healthcare workers was an additional measure alongside the full suite of public health measures, control and practices in place already at that time including: guidance for testing and isolation of healthcare workers with symptoms; appropriate use of Personal Protective Equipment; ensuring adherence to good hand hygiene guidance; compliance with guidance on social distancing; and the suite of other robust infection prevention and control measures in place in healthcare settings.

306. On 7 July 2021, I attended a meeting of the Healthcare Worker Testing Group. I thanked staff for the work to date but highlighted that current uptake of the programme was not satisfactory and that HSC Trusts were to urgently expedite the rollout of testing. I emphasised again the importance of the testing programme and its dual aims of keeping staff safe and protecting vulnerable patients [MMcB7/129 – **INQ000325598** and MMcB7/130 – INQ000325597]. At the meeting on 7 July 2021, the decision was taken for the asymptomatic testing programme to be extended to include all HSC Trust staff, both patient facing and non-patient facing workers. Routine LFD testing of asymptomatic workers was paused from 4 May 2022 for asymptomatic workers whose role did not bring them into direct contact with patients

[MMcB7/131 – INQ000416795], and from 3 October 2022 for all asymptomatic patient facing workers [MMcB7/132 – INQ000408170].

307. The approach to the management of self-isolation of healthcare workers who were cases and close contacts was also kept under review by the Department and was updated a number of times throughout the pandemic. For example [MMcB7/133 – SH/320 - INQ000000000], from 24 August 2021, taking account of changes at that time to the isolation guidance for the general population, fully vaccinated Health and Social Care workers were no longer expected to isolate and could return to work in most circumstances provided a number of safeguards were in place, including specific testing requirements. Further updates were issued by the Department including on 21 December 2021 [MMcB7/134 – INQ000530991], 31 December 2021 [MMcB7/135 – INQ000535682], 17 January 2022 [MMcB7/136 – INQ000520332], 21 January 2022 [MMcB7/137 – INQ000520297] and 4 May 2022 [MMcB7/138 – INQ000416795]

Care Homes

308. Testing for Covid-19 was part of a package of comprehensive measures for adult care homes in NI, recommended and advised by the Department from early in the pandemic. As care homes are distinct from other care settings, they are enclosed environments and have a specific and particular risk profile, residents in care homes were identified early in the pandemic as being at increased risk, given the strong age-related association with poor outcomes, compounded by underlying health conditions frequently seen in the older population. Protecting residents and staff in care homes was a key priority for the Department throughout the pandemic.

309. The expansion of testing in care homes progressed in a phased way throughout the pandemic from initial Covid-19 testing of care home residents and staff displaying symptoms, to Covid-19 testing made available to all residents and staff, and later to visitors.

310. The EAG-T was responsible for advising and recommending Covid-19 testing proposals for care homes which was considered by the Department's policy leads to

inform advice to myself and the Health Minister for review and approval. I established a Care Home Task and Finish (T&F) Group, in May 2020 and this was chaired by the DCMO, Professor Lourda Geoghegan, comprised key policy and professional representatives from the Department, the EAG-T, the PHA, and the Regulation and Quality Improvement Authority (RQIA). The Group's remit was to provide effective direction, support and guidance to successfully complete Covid-19 testing of all residents and all staff across care homes by June 2020 which had been announced by the Health Minister on 18 May 2020 [MMcB7/139 – INQ000103704]. The Care Home T&F group members also provided their expert knowledge and input to help appropriately inform and shape testing policy proposals including how to effectively expand the provision of Covid-19 testing arrangements in care homes.

311. The PHA managed the detail of establishing and maintaining the testing programme in care homes, and of the delivery, logistics and operations. The collaborative and multi-agency working partnership including between the Department, the PHA, the HSC Trusts, the Northern Ireland Ambulance Service (NIAS), the care homes themselves and the Pillar 1 (local HSC laboratories) and Pillar 2 (the NTP) enabled the successful delivery of testing in care homes.

312. The following provides a high-level summary of the evolution of the approach to testing in care homes:

i. IPT Version 1 dated 19 March 2020 [see MMcB7/055 - INQ000120705]: testing of residents in residential or care settings where there was a possible cluster or outbreak of Covid-19 infections;

ii. IPT Version 2 dated 26 March 2020 [MMcB7/140 – INQ000362314]: enabled testing of care home staff who were symptomatic or isolating if a member of their household was symptomatic;

iii. From 12 April 2020: testing arrangements extended to test all symptomatic residents in care homes with a possible outbreak or cluster of infections (prior to this policy change, a maximum of 5 residents were tested in each care home reporting a possible outbreak or cluster). The testing of all symptomatic residents in the event of

an outbreak was agreed at the Department's EAG-T on 10 April 2020 [MMcB7/142 – SH/298a - INQ000437570] and was operationalised from 12 April 2020 via discussions between the PHA Health Protection team with those care homes that were experiencing an outbreak [MMcB7/142a - INQ000362328]. The updated requirement was then captured in the updated IPT Version 3 which issued on 19 April 2020 [MMcB7/143 – INQ000103724];

iv. IPT Version 3 dated 19 April 2020 [MMcB7/143 – INQ000103724]: in line with the Public Health England guidance, all patients being discharged from acute hospital care to a care home to be tested for Covid-19 48 hours in advance of discharge;

v. From 24 April 2020 [MMcB7/144 – INQ000103694]: for new outbreaks in care homes, all residents and all staff to be tested for Covid-19 as part of the initial risk assessment of each outbreak (previously only those displaying symptoms were tested). While the Minister announced the change on 27 April 2020, it had taken effect from 24 April 2020 [MMcB7/144a - INQ000145670];

vi. From 18 May 2020 [see MMcB7/039 – INQ000103704]: testing available to all care home residents and all staff, to include care homes which had not experienced an outbreak. Initial phase of this expansion of testing was completed in all care homes at the end of June 2020;

vii. From 3 August 2020 [MMcB7/145 – INQ000346702] a regular programme of ongoing PCR testing commenced:

(i) regular testing through the NTP in 'green' care homes (without a Covid-19 outbreak), with all asymptomatic care home staff PCR tested on a fortnightly basis (increased to weekly testing in November 2020) and asymptomatic residents PCR tested every 28 days (this testing remained in place until December 2021); and

(ii) PCR testing in care homes with a suspected or confirmed Covid-19 outbreak, testing undertaken through local HSC Laboratories and care homes supported by HSC Trusts to complete this testing.

viii. From 20 August 2020 [MMcB7/146 – -INQ000437739]: further enhanced programme of testing in care homes with a suspected or confirmed Covid-19 outbreak. The number of testing rounds to be undertaken in the care home was to be determined taking account of the specific circumstances of the care home, including if there was a single symptomatic individual, or if there were two or more symptomatic individuals at the same time;

ix. From 3 November 2020 [MMcB7/147 – INQ000381353]: regular testing of asymptomatic staff increased from once every two weeks, to once a week;

x. IPT Version 7 dated 12 October 2020 [MMcB7/148 – INQ000530994]: recommended that RQIA Inspectors entering care homes should be tested for Covid-19 at 14-day intervals;

xi. From 16 December 2020 [see MMcB7/141 – INQ000256371]: as an additional mitigation measure, PCR testing was made available for asymptomatic visitors (or Care Partners) who chose to have a test prior to visiting a care home setting. This testing was provided for an interim period limited to 1 visitor (or Care Partner) per resident per week and was accessible from 16 December 2020 until 8 January 2021;

xii. From 15 January 2021: nominated Care Partners were offered regular PCR testing at the same frequency as care home staff testing (weekly at that point). During the course of the pandemic, in view of the nature of the role of Care Partners, as Covid-19 testing advice was adjusted for care homes, it was recommended that Care Partners follow the same Covid-19 testing pattern as care home staff;

xiii. From January 2021: the PHA working closely with the care home sector led on the deployment of LFD tests for visitors to care homes. The first care home began testing visitors on a voluntary basis during the week commencing 18 January 2021;

xiv. 7 May 2021 [MMcB7/149 – INQ000348908]: the Health Minister approved expansion of the programme of LFD testing for asymptomatic visitors to all care homes across NI. On 15 June 2021, I wrote to care homes to advise that the Department was

moving to extend the LFD self-testing initiative to all asymptomatic visitors. The letter [MMcB7/150 – INQ000348909] explained that regular and ongoing testing of people who visited a care home could reduce the risk of Covid-19 by identifying people who were asymptomatic but who might be carrying the virus and may be spreading the virus unknowingly. Although there was no mandatory requirement for a visitor to have a Covid-19 test in advance of a visit, care homes were asked to promote and strongly encourage all visitors to avail of the free LFD self-testing kits which were made available, with visitors to undertake twice weekly LFD self-testing in the comfort of their own home. The letter advised that if the visitor had a positive LFD test result, they should immediately self-isolate and book a confirmatory PCR test and must not visit the Care Home. The letter also explained that while a test for Covid-19 reduced the risk associated with visiting (as an additional risk reduction measure), it did not completely remove the risk. The Department reiterated the importance of all other Infection Prevention and Control (IPC) measures such as hand washing, maintaining social distance and wearing of Personal Protective Equipment (PPE) including face coverings, continuing to be implemented at all times during each care home visit. The PHA also separately wrote to care homes outlining the actions to be put in place to implement the LFD self-testing for Covid-19 for visitors to care homes;

xv. From the 22 December 2021[MMcB7/151 – - INQ000459409]: with the emergence and rapid spread of the Omicron variant, the regular asymptomatic testing arrangements in care homes was augmented to continue to protect residents and staff. It was recommended that care home staff undertake 3 LFD tests each week, in addition to their regular weekly PCR test. Agency staff working in care homes were to take a LFD test before commencing every shift in any new home and if working for an extended period in a single care home, agency staff were to follow the same testing pattern as permanent staff. There was no requirement for residents to undertake regular LFD testing unless they planned to leave the Care Home. Residents were to continue to be offered a PCR test every 28 days;

xvi. On 31 December 2021 [MMcB7/152 – INQ000520325]: the LFD testing frequency for care home staff was increased from 3 LFD tests per week, to a daily LFD test, in addition to the weekly PCR test; and

xvii. 25 January 2022 [MMcB7/153 – INQ000326095]: further updated operational guidance was issued by the PHA to care homes which provided updated advice on matters including the temporary removal of the guidance to confirm a positive LFD test result with a PCR test for care home staff, unless the staff member was in one of the clinical groups who may have been eligible for Covid-19 treatment.

313. Following the publication of the Department's Covid-19 Test, Trace and Protect Transition Plan on 24 March 2022 [MMcB7/059 – INQ000348966], the PHA issued updated guidance to care homes on 22 April 2022 [MMcB7/154 – SH/316 – INQ000520300] which took effect from 25 April 2022. This guidance removed the requirement for asymptomatic care home residents to be PCR tested on a monthly basis and the weekly PCR testing for asymptomatic care home staff. Care home staff (including Agency staff and Care Partners) still continued to undertake LFD testing. LFD testing also remained in place for visitors and visiting professionals to a care home. For care home residents with symptoms of Covid-19, the guidance explained that residents should take a LFD test at the onset of symptoms (day 0) and take a further LFD test 48 hours later (day 2) if the first LFD test was negative. A PCR test was no longer required. The guidance also advised that staff members with Covid-19 symptoms should follow the same symptomatic testing protocol as for residents.

314. On the 5 May 2022, the PHA issued a further update to care homes about testing arrangements including [MMcB7/155 – SH/317 – INQ000348911] amongst other things, advice on the following: the management and testing of residents and staff who had Covid-19 symptoms; testing when positive cases had been identified in a care home but outbreak not declared (Rapid Response Testing); and testing during an outbreak in a care home. Although optional, twice weekly LFD testing for visitors also continued to be promoted.

Schools

315. Given the associated complexities and requirement to provide detailed advice in relation to schools, in the summer of 2020, I established a group to coordinate the provision of public health advice and expertise to the school sector in support of the Department of Education (DE) and the Education Authority (EA). Membership

included the DE, the EA, the PHA and the Department. This group was chaired by myself in the early stages of its work and subsequently by the DCMO, and later by the Associate DCMO. Meetings of the group continued throughout the pandemic to discuss advice on a range of policy and operational considerations including in relation to testing programmes, contact tracing and isolation. It remained DE and the Education Minister's responsibility to determine the policy on school closures and the use of NPIs in schools in addition to producing detailed guidance for schools on how to mitigate the risk of Covid-19 transmission on which the PHA and the Department advised.

316. The PHA also operated an advice line for schools in the initial period of the pandemic response. This function later transitioned to the EA as their knowledge and experience of managing Covid-19 increased. The PHA continued to have regular liaison with the EA and at times with the DE to advise on specific matters. A range of communications and resources for schools and other education settings was produced by the PHA, with policy input as required, including in relation to TTP, and were shared with the EA for dissemination to all schools. The PHA also operated its dedicated Education Cell to provide specialist public health guidance and advice to schools where required.

317. In November and December 2020, with the endorsement of the Department and the DE, the PHA and the EA worked together to pilot the use of LFD asymptomatic testing in two secondary schools [MMcB7/156 – **INQ000438812** The policy intent was to use testing to reduce transmission of Covid-19 in schools by finding asymptomatic cases ('test to find'), advising them to isolate, with the aim of reducing the potential for transmission in schools and, in turn, minimising the negative educational impact of children either needing to be out of school or for schools to close.

318. Schools moved to remote learning in January 2021. A programme of regular asymptomatic testing was then in place to help support the reopening of schools in April 2021, as part of a wider range of public health advice measures in schools. The Health and Education Ministers announced on the 15 March 2021 that the programme would start in schools in the coming weeks [MMcB7/157 – **INQ000438810** MMcB7/158 – INQ000276618 and MMcB7/159 - INQ000438812].

319. The programme offered regular, twice weekly asymptomatic testing using LFD tests. Participation in the testing programme was encouraged but, ultimately, was voluntary. Initially, all pre-school, primary and post-primary staff (including teaching and support staff) and older students in Years 12-14 attending schools and other education centres were included within the scope of the programme. Individuals who received a positive result from an LFD test had to isolate along with members of their households from the time of their positive LFD result. A confirmation PCR test was required for everyone who tested positive on LFD.

320. On the 19 March 2021, I wrote to the then PHA Chief Executive about further proposed mitigations to be instated for the return of pupils to face-to-face learning in schools in April 2021. These were specifically that asymptomatic contacts of positive cases would be offered a PCR test, and that enhanced contact tracing was to be implemented [MMcB7/160 – INQ000530997 and MMcB7/161 - INQ000530998].

321. The PHA and the EA issued a joint press release on 19 April 2021 highlighting the importance of asymptomatic testing in schools [MMcB7/162 – INQ000530999]. Expansion of asymptomatic testing to other students (in years 8-11) commenced in June 2021 [MMcB7/163 – INQ000382971]. The asymptomatic testing programme recommenced when schools returned in September.

322. In October 2021, the Health Minister approved further changes to testing arrangements in schools, at a time when the rate of Covid-19 positive cases in school aged children was at its highest point since the start of the pandemic. The suite of changes included amongst other things the recommendation for daily LFD testing of any Post Primary School pupil(s) and staff members identified by the PHA as a household close contact. These changes to testing were in addition to the suite of mitigations in schools to help reduce the risk of Covid-19 transmission, which included cleaning, hand hygiene, ventilation, face coverings and consistent groups. The changes took account of recent policy and learning including from the other UK countries [MMcB7/164 – **INQ000438708**

323. In January 2022, in response to the emergence of the Omicron variant and subsequent increase in positive cases, the PHA and the EA reviewed operational

support arrangements to schools [MMcB7/165 – INQ000441887]. Based on clear advice communicated by the PHA and in line with existing policy, the EA helpline continued to support schools with multiple cases and could recommend additional measures, including one-off testing of classes or groups using LFDs, without the need for automatic referral to the PHA Education Cell. Schools requiring specialist public health guidance and advice continued to be referred by the EA to the PHA Education Cell. A joint PHA / EA letter issued to school leaders on 24 January 2022 [MMcB7/166 - INQ000531000]. The changes to operational support were required to optimise available PHA resource to ensure those schools that required specialist public health advice and support from the PHA could receive this in a timely manner, for example where there was a complex outbreak or cluster. The changes also enabled schools to be more self-sufficient, acting within the parameters of clear advice communicated by the PHA and in line with existing policy, without the need for automatic referral to the PHA Education Cell. All changes continued to be kept under review by the Health and Education Departments and the PHA and the EA through the Schools Assurance Group.

324. Evidence at the time showed that the Omicron variant, whilst more transmissible than previous variants, was also generally less severe with a reduced risk of serious illness and hospitalisation. As was the case with the Delta variant, the Omicron variant also tended to present in the vast majority of children as a mild, self-limiting illness. By this time, all adults had had the opportunity to be fully vaccinated and to receive a booster dose, and vaccination clinics remained open for those people who had not yet taken up the offer of vaccination.

Schools for Children with Special Educational Needs

325. On 27 January 2021 [MMcB7/167 – INQ000276619 and MMcB7/168 – **INQ000441561** the Health Minister announced a programme of weekly testing of pupils and staff to be introduced in schools for children with special educational needs in NI. The programme commenced at the start of February 2021. This programme used the LAMP testing technology, which is a saliva-based test and was chosen to enable testing of children who would not be able to tolerate regular nose and throat swabbing, with the aim of making testing easier. The key aim of the programme was to

find asymptomatic and pre-symptomatic cases early, so they and their contacts could be isolated and therefore help reduce the risk of transmission in the school setting. This programme of testing was led by the PHA working collaboratively with delivery partners in the EA and in QUB, and was jointly sponsored by the Departments of Education and Health. From April 2021, all Schools for Children with Special Educational Needs in NI participated in the programme. In January 2022, the programme switched to testing using LFDs following the availability of nasal only swab LFDs, as again these were considered easier for most children with special educational needs to use.

326. In line with the Department's Covid-19 Test, Trace and Protect Transition Plan (published 24 March 2022), the programmes of routine asymptomatic testing in education settings - mainstream schools, early learning and childcare, universities and further education colleges - stopped at the Easter break in mid-April 2022. Asymptomatic testing in schools for children with special educational needs continued to be offered until June 2022.

Testing at Northern Ireland's Border

Chronology of Testing

327. The restrictions placed on international travel made an important contribution to the public health response to the pandemic, particularly as new variants emerged globally. The steps taken by the Department relating to testing at NI's border fell within the parameters of the legislation which placed restrictions to international travel in NI, as enacted under the following regulations:

i. The Health Protection (Coronavirus, International Travel) Regulations (Northern Ireland) 2020;

ii. The Health Protection (Coronavirus, International Travel and Public Health Advice for Persons Travelling to Northern Ireland) (Amendment) Regulations (Northern Ireland) 2020;

iii. The Health Protection (Coronavirus, International Travel) Regulations (Northern Ireland) 2021; and

iv. The Health Protection (Coronavirus, International Travel, Operator Liability, and Information to Passengers) Regulations (Northern Ireland) 2021.

328. A chronology of changes to the regulations is set out at [MMcB7/169 - INQ000531002]. Changes to testing are identified in the table, where relevant, together with a brief overview of the intent of the change. In the main the changes were implemented from the date the relevant, updated legislation took effect. Testing requirements were first introduced through the regulations in January 2021 and were reviewed on an ongoing basis. The travel regulations placed a duty on the Department to review the need for the requirements imposed by the regulations, including in relation to testing, at least once every 21 days.

329. Border health measures, including in relation to testing at the border, have been provided in detail in my evidence to Module 2C of the Inquiry at paragraphs 734 - 746 [MMcB7/170 – INQ000421704].

Role of the Department in Development and Implementation of Policy

330. As previously described, policy decisions in relation to testing and isolation to support International Travel and Travel within the Common Travel Area were referred by the Department to the NI Executive for consideration, agreement and approval. Through the work of the International Travel Directorate, the Department coordinated the review of all relevant papers, information and data, which were subsequently reviewed and considered by myself and CSA, and our advice was then provided to the Health Minister. Relevant papers underpinning changes to the regulations and testing arrangements were then submitted to the NI Executive. The Department also prepared and made the final regulations which were considered by the NI Assembly Health Committee.

331. The changes to policy took effect through the updated regulations. The Department did not have a lead role regarding implementation and enforcement of the policy. The

Department did make tests available for use by the public, for example working with local airports to make LFDs available to aid those travelling.

Advice from the Department

332. On 9 May 2020, the other UK CMOs and I provided joint advice to our respective Ministers. This advice sought to inform UK Government policy on the relative contribution of imported cases of Covid-19 to the epidemic in the UK. We agreed in summary that:

i. Imported cases mattered most when the UK had a low level of infection. When domestic transmission was very high, imported cases were such a small proportion of the total that they made no significant difference to the epidemic. As the UK moved to a situation where local incidence and prevalence was much lower, imported cases could become a higher proportion of the overall number of infections and so preventing them could have some benefit. This was a gradual process, so there was not a 'threshold'. It was, however, the case that once rates of domestic transmission were low it was potentially a material issue;

ii. Benefit only existed to a significant degree when people were coming in from a country with a higher prevalence than the UK, so that the person being asked to self-isolate had a higher probability of having the disease than the UK population. Therefore, quarantining for 14 days those people who came from a country with a higher prevalence than the UK might have had a useful impact on the epidemic once the UK was at low prevalence, but quarantining those from countries with a lower prevalence than the UK would not; and

iii. Quarantining was not only, or even mostly, about the epidemiology at that stage of the Covid-19 epidemic. Wider public confidence in the response and impact on travel and trade, among other issues, should be considered when making policy on quarantining at the border and might be more important in policy terms. This was not for us as UK CMO's to advise on, as it was not where our expertise lay.

333. The broad scientific opinion was and remains that while border closures can play a

useful role in delaying virus spread, they cannot prevent pandemics and, in my own view, once Covid-19 had spread beyond China it was, inevitably, going to reach the UK and Ireland eventually. Throughout the pandemic, policy officials, the CSA and I advised the NI Executive on a wide range of matters related to border health measures and related testing. This advice addressed the risks associated with travel from higher prevalence countries, those with low levels of genomic surveillance, the impact of potential variants, travel within the island of Ireland, self-isolation, and the UK Government's 'International Travel Issues – Global Travel Taskforce Report'. All of these matters were considered when updating advice in relation to travel testing.

334. Health policy is a devolved matter and therefore the UK Government consulted with the Devolved Administrations, including the NI Executive, on health protection measures at the border. The Department's policy development and advice underpinning the regulations was therefore informed by information on the risks associated with international travel provided from the UK Government's national analysis, for example from the Joint Biosecurity Centre (JBC), which took account of the reliability of epidemic surveillance data and quantitative information about prevalence, trajectory and testing.

335. With the agreement of the NI Executive, through the international travel regulations, the Department introduced duties on travellers to NI to comply with requirements in relation to completion of the passenger locator form (PLF) and testing and isolation requirements. This required travellers to provide their personal details, the address at which they were staying, their vaccination status (from 4 October 2021) and confirmation of the purchase of pre-departure and post arrival testing packages, and to self-isolate / enter in to managed quarantine, depending on the country the traveller arrived from. Policy advice in relation to testing also took account of the PLF data on international travellers entering the RoI before transiting to NI, although the extent of this information varied during the course of the pandemic.

336. Following the introduction of 'Travel Corridors' in July 2020, subsequent amendments to the 'list of exempt countries' followed from 12 July 2020 to 16 January 2021. Changes to the list were based on the scientific evidence from JBC and public health

risk assessments of this by the UK CMOs, and the advice that the CSA and I provided to the Health Minister and NI Executive was based on this analysis.

337. On 18 March 2022 the Health Protection (Coronavirus, International Travel, Operator Liability and Information to Passengers) (Revocation) Regulations (Northern Ireland) 2022 revoked the Health Protection (Coronavirus, International Travel) Regulations (Northern Ireland) 2021 and the Health Protection (Coronavirus, International Travel, Operator Liability and Information to Passengers) Regulations (Northern Ireland) 2021; and all subsequent amending regulations. In effect, this meant that all travel restrictions were removed. However, the revocation regulations introduced a transitional provision whereby those travellers who arrived in NI with tests which had been booked for them to complete before the regulations were revoked were obliged to undertake those tests and the principal regulations continued to apply in respect of those international travellers.

338. While not in legislation, NI provided guidance [MMcB7/171 – INQ000145667 and MMcB7/172 – INQ000145703] for individuals travelling to NI from elsewhere in the Common Travel Area (being, Great Britain, Guernsey, Jersey, Isle of Man or the RoI). The guidance requested that if travel involved staying overnight in NI, a rapid LFD test should be taken before beginning the journey. The guidance also recommended that the individual should only travel if the test was negative and the individual was not suffering from any Covid-19 like symptoms. Completing a passenger locator form was not required unless the individual had been outside the Common Travel Area in the previous 10 days. The guidance also recommended taking post arrival LFD tests as well.

Cooperation with Others

339. UK border policy and operations are UK Government reserved matters. A fixed penalty notice regime was introduced under the International Travel regulations which enabled Border Force officials to issue fixed penalty notices to those arrivals who did not comply with the requirements in relation to the Passenger Locator Form and testing packages. Police Service of Northern Ireland (PSNI) officers were given powers under the regulations to issue fixed penalty notices to those contravening the

regulations, and were also given powers to direct a person who did not comply with the self-isolation requirements to return to the place of isolation or to remove them to the place of isolation.

340. A Managed Quarantine Service (MQS) was implemented in NI from April 2021 to support compliance with the International Travel Regulations. Managed Isolation was introduced to prevent, as far as reasonably possible, the entry of a variant of concern into NI. In line with similar provisions across the UK, the MQS provided a number of different services including managed isolation and testing requirements for those travelling from Red List countries as set out in the travel regulations. The MQS operated under contracts and Standard Operating Procedures for contractors put in place and managed by DHSC/ UKHSA. Departmental officials also attended the Department of Health and Social Care/Devolved Administrations Managed Quarantine Service/Border Health Measures checkpoint meetings. These meetings discussed any planned changes to red list country arrivals and policies, the policies on testing and the MQS. Meetings were held with varying frequency, sometimes daily, and provided an awareness of operational matters such as contract handovers, stock, information on bookings, occupancy and testing compliance in the local Managed Quarantine facilities.

341. The Department was also responsible for liaison with the Home Office (Border Force) in relation to compliance by airlines and cruise operators coming to NI in relation to the restrictions on passengers, and the information which had to be provided to passengers, including in relation to testing. This was a complex matter, as some aspects of policy in this area were in effect cross-cutting between the UK Government and the Devolved Administrations. For example, in NI the enforcement of measures was the responsibility of the Home Office Border Force and the PSNI, with the PHA providing advice in relation to Port Health.

342. There was very close liaison with the UKG, other DAs and the RoI in relation to border health measures including risk assessments which were carried out in relation to the risk associated with travel from individual countries; the completion of PLFs; and managed quarantine and testing requirements. Decisions made in any of these jurisdictions inevitably had an impact on the other jurisdictions given travel within the

CTA, and international travellers often arrived in one jurisdiction on their way to another jurisdiction. Within the UK these discussions frequently took place at Covid-O. Discussions also took place in multiple other forums, such as the Border Health Measures Board meetings, which was chaired by the Cabinet Office. The Border Health Measures Board looked at all aspects of International Travel and the future of border controls. There was also the UKG /DA International Travel Programme Board meetings, which were chaired by the Department for Transport. The UKG /DA International Travel Programme Board consisted of Whitehall departments and DAs and their meetings discussed a range of issues to include UKG policy changes; new proposals that were being brought for Ministerial decision at Covid-O meetings; and DA's position on alignment. There was also close liaison between NI officials with their counterparts in other CTA jurisdictions, including RoI.

343. The Department, its counterpart in RoI, and their respective agencies, agreed the terms of a Memorandum of Understanding (MoU) which was entered into on 7 April 2020. The MoU was known as the 'Covid-19 Response – Public Health co-operation on an All-Ireland Basis' agreement [MMcB7/173 – INQ000441675]. Under the terms of the MoU, the two departments had weekly meetings, jointly chaired by myself and my CMO counterpart in the RoI. The meetings were attended by the CSA from NI and DCMOs from both jurisdictions and respective subject-specific policy lead officials. Data was shared in relation to the pandemic trajectory and information concerning the policies covering international travel in relation to border health measures, including in relation to testing requirements. This close joint working was key in managing the pandemic response across many areas, for example assisting agreement on the PLF data required (including in relation to testing). Discussions with RoI counterparts were helpful to inform policy, where appropriate but Border policy is a reserved matter, and NI could not itself legislate in relation to the RoI border. Advice and guidance on testing within the CTA and between the RoI and NI remained a matter for the NI Executive.

Testing in Prisons

344. Prisons are enclosed environments and have a particular risk profile which can increase the risk of transmission and outbreaks. As such, testing in prisons was

identified early in the pandemic as being a priority. Testing in prisons was taken forward by the South Eastern HSC Trust Prison Healthcare Team in collaboration with the NI Prison Service. The Assistant Director of the South Eastern HSC Trust Prison Healthcare Team attended the Department's EAG-T on occasion to provide an update on testing and was at times in direct contact with the Chair of the EAG-T. Policy in relation to testing in prisons was kept under review including as outlined below:

i. Version 1 Interim Protocol for Testing – March 2020 [see MMcB7/055 – INQ000120705]: Clusters of disease in residential or care settings, for example long term care facilities and prisons;

ii. Version 5 Interim Protocol for Testing – May 2020 [MMcB7/174 - **INQ000416776**]: All new admissions to prison were to be tested. This expansion was in addition to the testing of existing prisoners should they develop symptoms indicating possible or probable Covid-19 infection, and the testing of NI Prison Service staff which was also in place [MMcB7/175 – INQ000531004];

iii. Version 8 Interim Protocol for Testing – 20 July 2021 [MMcB7/271 - INQ000535689]: Regular Testing of Prison Staff including South Eastern HSC Trust Healthcare Team. All prison staff were offered weekly PCR testing commencing from February 2021.

345. The Department understands that NI did not experience any significant outbreaks in prisons. The South Eastern HSC Trust Healthcare Team and the PHA may be best placed to provide more detailed information if required to assist the Inquiry.

Places of Worship and Indoor Accommodation

346. The Department did not have a specific policy in relation to testing in places of worship or for those living in overcrowded accommodation. The general public health advice was to avoid overcrowding and to ensure all indoor spaces were well ventilated. The PHA had operational responsibility for providing sector / place based specific public health advice and, as part of this, would have considered the appropriate approaches to testing in such settings as part of outbreak management and to manage transmission risks. These settings included for example higher risk working

environments such as the agrifood sector. In this sector there were a number of complex factors with respect to the working environment, transport, accommodation and social factors which contributed to this risk and outbreaks. The PHA may be best placed to provide further details should that be required.

347. There was also regular engagement between the PHA with churches and other places of worship to provide advice to help reduce the risk for those attending services, including those that were more vulnerable. Faith leaders in NI also met regularly and engaged directly with the CSA and myself and we provided advice on a wide range of matters including testing, social distancing, the use of face coverings, singing and other matters that were raised.

Asylum Centres

348. New entrant asylum seekers to NI were to be tested by PCR on day 2 and 8 as well as self-isolating. The Department understands that the PHA and the HSC Trusts worked with local accommodation centre providers to support the operational logistics of testing and to provide public health advice. Should further information be helpful to assist the Inquiry, the Department suggests this would be best provided by the PHA.

Equalities and Testing

Equalities and Infection Patterns

349. Epidemics of infectious disease and pandemics exacerbate and accentuate existing disparities in society, such as those associated with deprivation, ethnicity, sex and age. The Covid-19 pandemic therefore resulted in some predictable, and some less predictable, disparities in health outcomes, including the significant age associated risk and the risk of more severe disease in people with obesity. Some health impacts are distinct to certain infections and how the infections are transmitted. For example, some of the disparities in the Covid-19 pandemic arose due to the fact that the route of transmission was airborne. In general, increased mixing of people and a larger number of contacts particularly in indoor environments increased the risk of infection and this was reflected in the number of people testing positive. This contributed to the generally higher rates of people testing positive and increased community

transmission in urban, more densely populated areas as opposed to rural areas. There was also an increased number of people testing positive and increased transmission among those living in multi-occupancy homes, those working in settings associated with a high number of face-to-face contacts and those working in environments with inadequate ventilation. At times such factors overlapped, for example in the food processing sector in NI where employees often lived in multiple occupancy accommodation, shared transport arrangements and worked in an environment which increased the risk of transmission. This resulted in several outbreaks of Covid-19 in this sector in NI during the pandemic. Similarly, the increased mixing and number of contacts among younger people as compared to older people again contributed to more younger people testing positive. In addition, more deprived communities, those people working in public facing roles and younger people were disproportionately impacted by public health control measures in the short term, including closures to school and the hospitality sector. These factors are considered more fully in the CMO Technical Report Chapter 2 [see MMcB7/021 - INQ000177534].

350. On 17 June 2020 the Department published the 'Coronavirus Related Health Inequalities Report' [MMcB7/176 - **INQ000137375** This report presented an analysis of Covid-19 related health inequalities by assessing differences between the most and least deprived areas of NI and within Local Government District (LGD) areas for Covid-19 infection and admission rates. The information in the report relates to the position as of 26 May 2020.

351. The report [MMcB7/177 - INQ000103719] was prepared by the Department's Information Analysis Directorate following a discussion with the Permanent Secretary [MMcB7/178 - INQ000130379] and approval from the Health Minister in a submission [MMcB7/179 - INQ000130380 and MMcB7/180 - INQ000137392].

352. The key findings from laboratory completed tests were as follows. The infection rate in the 10% most deprived areas (379 cases per 100,000 population) was a fifth higher than the rate in the 10% least deprived areas (317 cases per 100,000 population). The rate among females (308 cases per 100,000 population) was a third higher than males (234 cases per 100,000 population).

353. The infection rate among those aged over 65 was almost two-fifths higher in the 10% most deprived areas (1,027 cases per 100,000 population) than the rate in the 10% least deprived (750 cases per 100,000 population). Infection rates were highest in the 10% most deprived areas for under 65s, over 65s, and all ages. The rate in urban areas was 90% higher than the rate seen in rural areas.

354. In relation to hospital admissions, the admission rate for Covid-19 (confirmed or suspected cases) in the 10% most deprived areas (581 admissions per 100,000 population) was almost double the rate in the 10% least deprived areas (317 admissions per 100,000 population).

355. The rate for under 75s in the most deprived decile (369 admissions per 100,000 population) was approximately two and a half times that in the least deprived decile (150 admissions per 100,000 population). In comparison, the 75 and over rate for the most deprived decile was almost two-fifths higher than in the least deprived decile. While deprivation was found to be an important factor in relation to the likelihood of admission, age was found to have a greater impact. The standardised admission rate for the population aged 75 and over (2,255 admissions per 100,000 population) was 9 times that for the under 75 population (249 admissions per 100,000 population) [MMcB7/177 - INQ000103719].

356. With regards to social deprivation and links to Covid-19, research from NI published in the British Medical Journal (BMJ) in June 2021 supported this as a significant factor [MMcB7/181 - INQ000346704].

357. On 16 December 2020, the Department published a second 'Coronavirus Related Health Inequalities Report' [MMcB7/182 - **INQ000183436**] This report presented an analysis of Covid-19 related health inequalities by assessing differences between the most and least deprived areas of NI and within Local Government District (LGD) areas for Covid-19 infection, death rates and admission rates. The information in the report relates to the position as of 27 October 2020.

358. The key findings in respect of individuals with a positive test were as follows. The infection rate in the 10% most deprived areas (3,052 cases per 100,000 population)

was almost two-thirds higher than the rate in the 10% least deprived areas (1,859 cases per 100,000 population). The rate among females (2,050 cases per 100,000 population) was 8% higher than the rate for males (1,893 cases per 100,000 population). The infection rate among those aged over 65 was four-fifths higher in the 10% most deprived areas (3,187 cases per 100,000 population) than in the 10% least deprived (1,773 cases per 100,000 population). The rate in urban areas was over a third higher than the rate seen in rural areas, however the rate was again highest in mixed urban/rural areas (3,677 cases per 100,000 population).

359. The key findings in respect of admissions to hospital were as follows. The admission rate for Covid-19 (confirmed cases) in the 10% most deprived areas (275 admissions per 100,000 population) was more than double the rate in the 10% least deprived areas (126 admissions per 100,000 population). The admission rate for under 75s in the most deprived decile (167 admissions per 100,000 population) was approximately three times that in the least deprived decide (55 admissions per 100,000 population). In comparison, the 75 and over rate for the most deprived decile was almost three-fifths higher than the rate in the least deprived decile. While deprivation was found to be an important factor of the likelihood of admissions, age was found to have a greater impact. The standardised rate for the population aged 75 and over (890 admissions per 100,000 population) was over 9 times that for the under 75 population (97 admissions per 100,000 population).

360. The key findings in respect of deaths among those testing positive were as follows. The Covid-19 death rate in the 10% most deprived areas (77 deaths per 100,000 population) was almost two-fifths higher than the rate in the 10% least deprived areas (56 deaths per 100,000 population). The rate among males (67 deaths per 100,000 population) was one and a half times the rate for females (44 deaths per 100,000 population). The death rate in urban areas (63 deaths per 100,000 population) was double the rate seen in rural areas (32 deaths per 100,000 population). The standardised Covid-19 death rate for the population aged 75 and over (477 deaths per 100,000 population) was 9 times that for all ages (53 deaths per 100,000 population). The over 75 Covid-19 death rate was highest in the 10% most deprived areas (717 deaths per 100,000 population) where it was three-tenths higher than the rate in the 10% least deprived areas (549 deaths per 100,000 population).

361. The Department commissioned the Institute of Public Health in Ireland (IPHI) to provide high level monitoring of the wider evidence base in relation to the impact of the pandemic, and the measures to address it, on indictors within the overarching public health strategy for NI, "Making Life Better". The first two reports were produced in May 2020 [MMcB7/183 - INQ000276461 and MMcB7/184 - INQ000276462] and the third report in July 2020 [MMcB7/185 - INQ000276463]. Further reports were produced throughout 2020 and 2021. Although these reports were not shared directly with the Health Minister, they were shared with senior policy and professional officials within the Department and were used to inform the development of papers submitted to the NI Executive reviewing the coronavirus restrictions regulations. The level of detail provided in the papers to the NI Executive varied, for example, for some we focused on specific issues, such as physical activity and for others we summarised the evidence at a high level.

362. From the second Review of the Health Protection (Coronavirus, Restrictions) (Northern Ireland) Regulations 2020 [MMcB7/186 - INQ000346705] and thereafter throughout Wave 1 of the pandemic [MMcB7/187 - INQ000346706, MMcB7/188 - INQ000346707 and MMcB7/189 - INQ000346708] and subsequent waves, the NI Executive papers considered not only the impact of the Coronavirus pandemic itself but also the measures put in place to control the transmission of infection which considered the collective impact of all of the NPIs including test and isolation. The wider health, societal and economic impacts of the regulations were integral to weighing up the continuing necessity and proportionality of the restrictions and were also part of the consideration of each individual new measure proposed. This information was supplemented by the Monitoring of 'Making Life Better' Indicators and supported by a number of pieces of work taken forward at the UK level by DHSC and Public Health England, including work to examine the apparent disproportionate impact of Covid-19 on the BAME population as well as marginalised groups such as the Roma community. The Department's advice to the NI Executive to inform reviews of the Regulations took account where relevant of available disaggregated data regarding patterns of those testing positive for example in relation to age, gender and deprivation.

Further Data Collection

363. As outlined earlier, a programme of asymptomatic testing was undertaken in schools for those with special educational needs. This was in recognition of the increased risk of infection in providing the supportive care required for their disability while in school and the increased risk from infection. This programme of testing was led by the PHA, working collaboratively with delivery partners in the EA and in QUB, and was jointly sponsored by the Departments of Education and Health. Management information to monitor the number of tests taken and the number returning positive rates was captured on an ongoing basis as part of this work. The Department suggests that the PHA may be best placed to assist the Inquiry further with any more detailed information that may be required.

364. The PHA collated data on the Covid-19 testing programme in Care Homes and produced a monthly Care Home Testing Report which summarised relevant testing data from both Pillar 1 and Pillar 2. The reports comprised a range of information including: the numbers of Covid-19 tests completed by Pillar each month; Covid-19 positivity rates, with test results attributed to Care Homes, broken down by residents and staff; the number of Covid-19 tests undertaken by residents' age; and the pattern of symptomatic and asymptomatic Covid-19 outbreaks in Care Homes [MMcB7/190 - INQ000432670]. Again, the Department suggests that the PHA may be best placed to assist the Inquiry further with any more detailed information that may be required.

365. I am not aware of overall data collected by the Department to monitor patterns of those testing positive in specific groups other than those identified in the statement. There was limited opportunity to establish new systems to collect and disaggregate such data in real time during the pandemic response. Both the Department and I recognise that the need to put in place better and more disaggregated data collection methods, in particular to support better capture and monitoring of data related to some vulnerable groups, is an area of important learning from this pandemic. While each pandemic will be different and those most at risk of infection and severe disease will differ, the ability to monitor the direct impact of any future epidemic or pandemic on key groups, including an assessment of the associated differential consequences of NPIs and

other potential control measures would allow for more targeted mitigation of those adverse impacts.

366. While it is the case that this data was not collected on an ongoing basis, both the Department and I did recognise from early in the pandemic the potential for negative impacts across society in general, and the potential for greater impact on certain groups including many of those listed above at paragraphs 167 and 308. At different stages of the pandemic, steps taken were intended to offer support and protection to other vulnerable groups including the learning disabled, those with physical disabilities and other physical conditions, and victims of domestic violence. This included for example detailed guidance and support for those who were designated as Clinically Extremely Vulnerable; the commissioning of an Enhancing Clinical Care Framework developed to help ensure that those living in care homes have access to the clinical and wellbeing support they want and need to live healthy, fulfilling lives; and implementation of recommendations arising from a Rapid Learning Review of Domiciliary Care in NI aimed at, for example, improving recognition of the workforce, improving recognition and support for family carers, and improvements to financial support and communications with providers. Further detail of these supports has been covered more fully in the Department's Corporate Witness Statement to Module 3 and in sections J and L of this statement [MMcB7/191 – INQ000485167] and are not repeated in this statement. The focus on support to this wider range of vulnerable groups reflected the Department's full range of responsibilities.

367. The PHA also worked to consider the impact of Covid-19 on key public health services, and to target at-risk groups to reduce the risk of harm as far as possible. As has been described earlier in this statement, for example at paragraph 97, this included targeted support for those in ethnic minority groups and in households of multiple occupancy as part of the incident and outbreak management response. I am not aware of any specific inequalities that were identified in the delivery of testing with regard to minority religious groups. As described earlier in this section, there was regular engagement between the PHA with churches and other places of worship to provide advice, and faith leaders in NI also met regularly and engaged directly with the CSA and myself on a wide range of matters including in relation to testing.

Equalities and Testing

368. I was very aware that, despite evidence of a strong willingness on behalf of the NI population to engage with Covid-19 testing and contact tracing services, a concerted focus was required throughout the pandemic on behalf of the Department, the Public Health Agency, the National Testing Programme and all test and trace delivery partners to help ensure strong uptake, coverage and accessibility of test and trace services across all groups in society.

369. I and Departmental colleagues recognised a range of factors that had the potential to affect access to and engagement with testing; these factors and mitigations are explained in the paragraphs immediately below in this section of the report. The Department had a focus on ensuring that services were as accessible as possible for as many people as possible. It was recognised that for test and trace programmes to be effective and to be equitable, engagement, uptake and access needed to be high across the population, geographically and in all ethnic and social groups. As such, significant efforts were made by the Department, my team within CMOG and delivery partners to put in place a wide range of channels for citizens to access both PCR and LFD testing, including widespread geographic coverage of physical sites. This is addressed more fully above for example at paragraph 282. It was also recognised that a one-size-fits-all approach could not be adopted as different groups within the population might require responses and interventions tailored to their specific needs. As such, the Department and the PHA developed tailored programmes of testing across a range of sectors, for example in care home, schools and hospitals, to seek to optimise access and engagement.

370. The cost of tests was also a potential factor limiting engagement with testing, and therefore test kits and delivery of test kits was made available free of charge for all those that needed them in line with policy. This benefitted all citizens, including those in lower income households and on zero hours contracts. The personal cost of loss of earnings as a consequence of self-isolation was also an important consideration and, in that regard, financial support and the role of the DfC's Discretionary Payment Scheme is considered later. The Department used ongoing communications, to which the CSA and I contributed, to highlight the availability of test kits and to help build

public trust and understanding, for example to explain the role and limitations of new testing technologies that became available [MMcB7/192 - INQ000381373]. In addition to online press releases and social media messaging, the Minister and senior departmental officials, including CMO, DCMOs, CSA and also senior professionals from PHA, appeared frequently on local radio news and current affairs programmes, providing information on testing, contact tracing, infection prevention control and vaccination. Press conferences were translated into British and Irish sign language (British Sign Language (BSL) and Irish Sign Language (ISL)). Departmental press releases were also reported widely by the daily and weekly newspapers and on local radio and TV, enabling citizens who didn't access online news or social media to receive relevant information via other more accessible and traditional channels. While press releases were issued in English only, which would be the common approach, all guidance issued was available in different languages on request. The Covid-19 CareNI telephone helpline commissioned by the Department (see also paragraph 506) provided assistance to citizens with checking symptoms of Covid-19, booking a test and receiving advice in regard to self-isolation. The specification for the service included provision for translation to a number of different languages and also signing for the deaf in both Irish and English.

370.a The PHA, HSCB and the Executive Office (TEO) also had information translated into various languages for leaflets and posters in relation to TTI and for vaccinations. A number of PHA publications were translated, in video and with 'voice overs' for example of hand washing and social distancing measures. Some of these were specifically designed for Roma communities and a bespoke Covid-19 helpline for Roma was established by the PHA. PHA used a multi-channelled approach to message to target audiences and the general public via website information, press releases, social media, animations, graphics, videos and interviews with media outlets, and this was continually developed to take into account changing regulations and guidance and emerging evidence and information on the need for targeting particular audiences and sectors. Messaging was adapted for a range of audiences on key public health issues, making them available in various languages, including BSL and ISL and large print accessible word documents. Subtitles were also used by default in animations and videos to assist with accessibility. The PHA worked with partners including those from other government departments, patient and family liaison groups,

and local ethnic minority representative groups to engage with individuals through targeted communications, and provided advice on signs and symptoms, testing, isolation and vaccines, using influencers and recognised individuals from minority communities whose first language was not English.

370.b TEO and its Executive Information Services (EIS - see paragraph 621) was responsible for the NI Executive's Covid-19 public information campaigns throughout the pandemic and coordinated communications and messaging with respect to NPIs, including the importance of test, trace and self-isolation if a person tested positive. EIS information was made available in different formats, including braille and sign-language, as well as multi-language options. Special campaigns were also developed for several hard-to-reach target groups such as young people, students and farmers. To make the press conferences as accessible as possible, both British and Irish sign language interpreters were used from the beginning of the pandemic. The sign language interpreters appeared on screen for the duration of each daily press conference. A total of 19 videos were posted on nidirect which were also signed for access to the deaf community. The nidirect YouTube channel hosted the information videos and by October 2022, these videos had been viewed almost 135,000 times.

371. The Department and the PHA, through the TTP Oversight Board and the NI SMART programme board which I chaired and of which the CSA was a member, also worked hard with stakeholders and delivery partners to ensure test and trace services included a focus on equity of access and availability, ensuring a differentiated approach to testing policy interventions and implementation where specific needs were identified for different groups. This also aimed to optimise uptake of service across different groups including marginalised and/ or vulnerable communities.

372. Given their lead role in operational delivery of test and trace services, there was significant work undertaken by colleagues in the PHA in this regard, building on their expertise in these areas and drawing on their health improvement teams, established community networks, and behavioural science capacity, to help overcome barriers to the uptake of test and trace services and to ensure services were as accessible as possible to all of the population in NI. While we have outlined some operational measures below at paragraph 376, the Department suggests that the PHA will be best

able to assist the Inquiry with further detail. As also referenced earlier in this statement the PHA Action Plan was developed by PHA to aid its work with hard-to-reach groups including vulnerable groups and the BAME (Black, Asian and Minority Ethnic) population, to assist in particular in ensuring compliance with the testing and tracing. At the outset of the pandemic I understand that the PHA had approximately 170 existing contracts with local Councils and networks which I believe were likely beneficial in supporting the rollout of testing in areas of deprivation and testing of vulnerable and marginalised groups. The PHA would be best placed to assist the Inquiry with further detail on how these existing networks and infrastructure were utilised to support operational delivery of test and trace.

373. All aspects of my focus as CMO and the Department's and the PHA's response to the pandemic were established and managed through a public health lens which had inherently and at its core a focus on accessibility and equity, and a focus on protecting those who were most vulnerable. This was also the case in relation to the Test, Trace & Protect Strategy both in its policy intent and in the operational rollout led by PHA and other delivery partners.

374. As has been described previously, testing capacity was significantly constrained in the early stages of the pandemic. This led to difficult choices regarding the need to prioritise available capacity. The basis of decision making by the Department was to prioritise available capacity to protect the most vulnerable. This included an early focus on testing of healthcare and other key workers. Both the Department and I were aware at that early stage that there were risks and implications of unequal access to testing for at-risk, vulnerable or lesser-heard groups, but prioritised limited capacity to best protect those known to be at most severe risk or who might have the greatest impact on spread to those at severe risk. The basis for prioritisation of testing capacity is described more fully from paragraph 263 above. As testing capacity increased this allowed the expansion of groups eligible to be tested and, throughout the pandemic, there was a continued focus by the Department and the PHA on ensuring equality of access to testing for those that needed it, including for those in at-risk, vulnerable or lesser-heard groups. These were matters considered at the TTP Oversight Board and the NI SMART programme board which I chaired.

Testing at Population Level

375. Testing for the general population in NI was delivered as part of the National Testing Programme led by DHSC / UKHSA in close partnership with the Department and PHA. In delivering the programme, the Department and CMOG particularly, working with DHSC / UKHSA and PHA locally, sought to deliver a testing service that was accessible to all citizens and service users including for those in marginalised and vulnerable groups. This included access to and use of both LFD and PCR testing. The range and geographic spread of in-person test sites and PCR / LFD delivery channels helped to provide widespread access to testing for all of the population. Further, there are many examples of targeted support and assistance aimed at maximising access and equity of access.

376. For example, significant measures were taken to help ensure that the delivery of testing and the communication of information in relation to testing at Pillar 2 test site facilities were accessible for those who had mobility and dexterity issues, hearing or visual impairment and people with other disabilities, and that services were tailored to help meet specific needs. This included provision of the following features:

i. Step-free access;
ii. Clear and appropriate signage;
iii. Accessible family-sized testing booths i.e. large enough to accommodate a wheelchair and at least one other person;
iv. Reception desk height at wheelchair level;
v. Option to be accompanied by a companion who can assist the person to test themselves;
vi. Option to bring a support dog on site;
vii. Designated accessible parking available within close proximity;
viii. Accessible toilets, where feasible;
ix. Suitable advice and guidance available on site throughout the testing process;
x. Test instructions available in a range of accessible formats, when requested. This included instructions in braille which were available by post;
xi. British Sign Language (BSL) DVD available by post;

xii. The 119-telephone helpline operated as part of the National Testing Programme and was available to help members of the public with any issues processing a PCR or Lateral Flow Device test, including the ordering and results reporting journey. Telephone lines were open every day (7am to 11pm) and support provided in 200 languages. BSL services were also available via the 119 contact centre (SignVideo); and

xiii. Textphone or phone text relay (text-to-speech and speech-to-text translation) via the 119 contact centre.

377. Lateral Flow Device Instructions for Use were also available online in large print and easy read versions, with easy read versions available in 17 languages. An audio version of test instructions (in English) was also available on the Royal National Institute for the Blind (RNIB) Information Line. RNIB was also commissioned to provide alternative format versions of testing instructions. The free *Be My Eyes* app was available to help visually impaired users to carry out a test more independently through an online video and step-by-step guides to take a lateral flow test. Users were also able to get live video assistance from NHS Test and Trace staff in helping them with how to order tests, use tests and register their test results.

378. The provision of free Home Test kits, both PCR and LFD, through the home ordering channel (via 119 telephone helpline and online ordering) also greatly assisted with accessibility of testing and helped reduced inequalities. Home ordering was of benefit to all citizens including those in lower income groups and those with limited or no access to private or public transport, including in more rural areas.

379. In the rare circumstances where an individual in NI was unable to travel to a local Pillar 2 test site and / or had no-one available to help them with a home testing kit, the relevant local Health and Social Care Trust was able to make arrangements to ensure that appropriately supported and assisted testing was provided to the individual in their own home. This included assistance where needed for those within our community with a disability and those who were elderly. The individual Health & Social Care Trust determined the most appropriate means of providing support, taking account of the specific circumstances and needs of the individual requiring a test. Similarly, in the rare circumstances where an individual was not able to tolerate PCR swab testing, for

example a vulnerable adult or child, it was possible to arrange a saliva-based PCR test directly with the respective Trust.

380. Alternatives to ordering tests and reporting results online was also particularly important for those that did not have access to digital services or were less comfortable navigating online processes, including for example some citizens in older age groups. The availability of in-person test sites within a reasonable distance from home, and the ability to order tests and report results via the 119 telephone line, were important in this regard. Further, with some evidence also that older groups may have a preference for collecting tests in person, maintaining a network of collection points within the local community served by public transport and with sufficient parking was important to help ensure equality of access. The range and geographic spread of in-person test-sites, LFD Collect and Pharmacy Collect services is described more fully above at paragraphs 256 and 282.

381. A summary of the guidance and further assistance available for citizens to order, take, and report the result of a test was made available on the Department's website, with links from the Department's site to NI Direct which offered further relevant help and guidance for the NI population and to the PHA's website. These sites were updated throughout the pandemic as guidance changed. The NI COVID Care Helpline also provided an accessible telephone support service for NI citizens by assisting callers with checking symptoms of Covid-19, booking a test and getting appropriate advice relating to Covid-19. This included providing support for older people, those with a disability and people with an underlying health condition.

382. As described in more detail at paragraph 282 above, throughout the development and operation of the NI SMART programme there was extensive and ongoing stakeholder engagement with a wide variety of groups. This included those representing marginalised and vulnerable groups, and thus sought to ensure equitable widespread availability and access to LFD tests. The Department held a number of workshops with stakeholders in October 2021 aimed at informing its strategic approach to supporting vulnerable groups and those most at risk, raising awareness of availability of testing and understanding of the main barriers to participating in the NI SMART LFD testing programme.

383. As part of the early development phase of the programme, the NI SMART team worked with the NTP, the PHA and policy counterparts in the other UK nations to identify occupations that presented the highest risk of Covid-19 transmission and provided updates to me as chair of the programme board. Many of these occupations included a high proportion of the workforce drawn from minority ethnic groups and migrant workers. This was supported by an evidence base that had been gathered in England before the NI SMART program was established. Direct engagement by the NI SMART team with the PHA in relation to clusters and outbreaks in NI provided evidence that this position was replicated here. Such occupations and sectors included meat processing, agri-food and food manufacturing generally and construction.

384. As such, from its early planning and commencement of delivery, the NI SMART programme worked with a wide range of stakeholders and partners across a number of NICS Departments (including DAERA, DfE and TEO), and across the public sector more generally including local councils, to prioritize the following four sectors in the first phase of the programme: Agri-food; Manufacturing; Essential Retail and Construction. [see MMcB7/112 - INQ000530983, MMcB7/193 - INQ000531005, MMcB7/194 - INQ000531006, see MMcB7/113 - INQ000530984, see MMcB7/114 - INQ000000000, see MMcB7/115 - INQ000530986, MMcB7/195 - INQ000531007 and MMcB7/196 - INQ000531008].

385. Further, the NI SMART team identified that access to LFD testing supported by trusted community groups was a key potential mitigation to lower uptake of Covid-19 testing for people from minority ethnic groups, who were also more likely to live in houses of multiple occupancy or multi-generational households. Therefore, the NI SMART team had a strong focus on engaging with such community groups as part of development of the programme. An EQIA was undertaken to support the development of the NI SMART programme [MMcB7/197 - INQ000531009].

386. The Department's Covid-19 Test, Trace and Protect Transition Plan (March 2022) set out a period of transition as the overall risk posed by the virus had reduced. However, the plan maintained a clear focus on test and trace activity to protect and support our most vulnerable and those at highest risk of serious illness should they contract Covid-

19. As described at paragraph 165, the Transition Plan included prioritisation of 'test to treat' to protect the sickest and most vulnerable from serious illness; 'test to protect' those living, working and visiting high risk and other vulnerable settings including hospitals and care homes; and testing to support outbreak management, with a continuing strong focus on high-risk settings such as care homes. Test kits remained available free of charge to all citizens to support all areas of testing set out in the plan. The Pharmacy Collect Service was also maintained to support access to testing after the Home Ordering through the NTP ceased at the end of March 2022. A draft EQIA was developed by the Department to support the Test, Trace and Protect Transition Plan. This was not presented to the TTP Transition Board for formal approval [MMcB7/198 - INQ000531010], as it was in advanced draft form but had not been finalised by the policy Directorate due the pace of work to finalise the overall Transition Plan and supporting communications etc. Given the core intent of the Transition Plan to move to a more targeted and proportionate system of test & trace – supporting transition towards a 'new normal' which in general had a positive impact on the public overall, and by extension for those with protected characteristics and other vulnerable groups – and the Plan's continuing focus on protecting those who were most vulnerable in the transition period, the Department believes that the absence of a final, formally approved EQIA did not have a significant impact on the final policy. The Department will work to ensure that should it be required for any future pandemic, an Equality Assessment is published at the same time as publication of the principle strategy document.

387. Testing programmes and protocols which prioritised accessibility of testing to support other vulnerable groups and high-risk settings throughout the pandemic are described earlier in this section. This includes, for example, testing in care homes and other social care settings; testing in prisons; testing to support visiting to hospitals; and testing to support children in special schools.

Testing to Support Clinical Pathways and Vulnerable Groups

388. As outlined in paragraphs 148 to 149 and 263 to 264, the Covid-19 Testing Strategy was supported by an Interim Protocol for Testing (IPT) for Covid-19 [see MMcB7/055 - INQ000120705]. The IPT was kept under continuous review with priority groups for

testing extended regularly in line with emerging scientific evidence and with expansions in testing capacity.

389. From Version 1 of the IPT and throughout all subsequent iterations up to and including the final IPT, Version 9 (dated 6 October 2021), there was a clear focus on targeted and differentiated testing to help protect the sickest and most vulnerable individuals requiring care and those caring for them, including health and care workers and other vulnerable groups. The Department recognised a heightened need to test these vulnerable cohorts, including those in hospital, in care homes and others, and made testing available accordingly.

390. Examples of this include testing made available through HSC Trust providers to support in-hospital testing and testing in other care settings including:

i. Chemotherapy Patients and their families;
ii. Cancer Patients and those requiring surgery;
iii. Weekend Leave for In-Patients – for example, oncology services;
iv. Patients hospitalised due to Covid-19;
v. Discharge to care homes;
vi. Vulnerable Adults and Children:
vii. for vulnerable adults and children who may not have been able to tolerate PCR swab tests, a saliva PCR test could be provided;
viii. Day Care and Short Break Services;
ix. Admissions to Hospices;
x. Hospital Admissions for Learning Disability and Mental Health;
xi. Acute Admissions to Hospital (non-elective and elective);
xii. Maternity services - mother and baby;
xiii. Long Stay Hospital Patients and Staff - where long stay is considered over 3 months – for example elderly, dementia and learning disability services;
xiv. Renal Transplant patients; and
xv. Acute Paediatric Haematology Admissions.

391. Other areas of testing policy which were targeted and designed specifically to support vulnerable groups include:

i. As has been described previously, a significant programme of testing of care home residents, staff & visitors (both symptomatic and asymptomatic);

ii. Again, as described previously, children with learning disabilities attending schools for those with special educational needs were offered testing in line with the arrangements previously described for those schools. Some adult service users attending Adult Day Care services may have learning disabilities and testing arrangements for those groups was set out in the IPTs, for example Version 9 (6 October 2021) set out regular testing organised through day care services with testing carried out in the local HSC Trust laboratory (weekly PCR swab for those able to tolerate or weekly saliva PCR testing for those unable to tolerate a PCR swab test);

iii. In recognition of the particular vulnerabilities of these groups of patients, prioritised testing was put in place for learning disability and mental health patients on in-patient wards. This included, from 4 May 2020 (IPT Version 4), that all overnight admissions were to be tested within 24 hours of admission, and from 9 July 2020 (IPT Version 6) retesting of patients after weekend discharges;

iv. Regular asymptomatic testing for staff in supported Living facilities;

v. Regular asymptomatic testing for those caring for vulnerable people – for example, Domiciliary Care Staff and Personal Assistants;

vi. Visitors to vulnerable settings for example hospitals, care homes and hospices; and

vii. Testing in prison settings.

392. In relation to testing administered by HSC Trusts service providers, any equality impacts in relation to the communication of information direct to the patient or service user regarding testing arrangements, including any necessary mitigations, would have been addressed by HSC Trusts.

393. As has been described above at paragraphs 146, 199 and 265, the Department kept testing policy and the provision of testing under continuous review throughout the pandemic and updated these regularly, for example as testing capacity increased, to take account of new technologies as more became known about the virus and where lessons were learnt leading to opportunities for improvement. In relation to testing provision for vulnerable groups, relevant examples include the provision of LAMP testing in schools for those with special educational needs. As described earlier, LAMP was chosen to enable testing of children who would not be able to tolerate regular nose and throat swabbing, with the aim of making testing easier. This testing later switched to nasal only LFDs, when performance was validated, again as these were deemed easier and more convenient to use which would aid uptake. As another example, provision was made in the IPTs for PCR saliva testing for those unable to tolerate PCR swab testing as part of HSC Trust testing programmes. The Department suggests that further details on delivery of this testing is best sought from individual HSC Trusts should that be required by the Inquiry.

Testing for Variants of Concern

394. The potential for new variants to emerge was recognised from very early on in the pandemic and was factored into considerations and planning by the Department from a very early stage.

395. The overall public health approach taken was to monitor for the emergence of new variants and to assess their potential significance clinically and from a public health perspective. The intention was to seek to contain the initial spread of new variants when first detected through local enhanced or surge testing, including the deployment of mobile testing units, and enhanced contact tracing, where appropriate. This was undertaken by the PHA. This ensured testing of the greatest number of people who had possibly been exposed, offering isolation and public health advice, and offered the best chance of curbing onward spread.

396. Regular verbal and written updates were provided to the NI Executive on the emergence of new variants and their potential significance in terms of community transmission, outbreaks, and hospital pressures. The analysis of the potential impact

of these new variants was contained in the weekly R paper and also informed the advice that the CSA and I provided to the Health Minister and the NI Executive on NPIs and other public health measures.

397. NI participated in the development of the Covid-19 Genomics UK consortium (COG-UK), the outputs of which informed understanding of variant spread and significance. This Consortium was established in April 2020 as a group of public health and academic institutions to collect, sequence and analyse genomes of SARS-CoV-2, bringing together multidisciplinary groups of public health academics including epidemiologists, genomics scientists, bioinformaticians and virologists to rapidly assess new variants. COG-UK delivered large-scale and rapid whole-genome virus sequencing to local NHS centres and the UK government. The data derived from COG-UK was used to help UK Public Health Agencies to manage the Covid-19 outbreak in the UK and inform vaccine research efforts. Regular updates were also provided by the UKHSA in relation to new and emerging Variants of Concern and Variants of Interest and were discussed at UK wide scientific meetings in which NI participated (SAGE, NERVTAG, Senior Clinicians Group) and within NI as appropriate (at SIG, Modelling Group, EAG-T etc). In addition, information was obtained from the weekly ONS survey reports from 25 September 2020.

Testing Methodologies for New Variants

398. The principal method used for testing to confirm Variants of Concern in NI and across the UK, and indeed internationally, was Whole Genome Sequencing (WGS).

399. WGS remained the principal method used in NI throughout the pandemic. While there was extensive use of rapid tests / point of care tests of various kinds (for example LFDs), these were not used for detection of specific virus variants. In addition, virus culture to confirm infectivity was not utilised as it was technically demanding and slow.

400. Reflex assay testing - also known as genotyping - was also used across the UK including in NI. Reflex assay testing is used to identify the presence of specific mutations which are indicative of a variant. Reflex assay testing was used as a strong indicator of a new variant but not definitive confirmation and was therefore not a

substitute for detailed WGS but used in parallel. Reflex assay tested samples showing that mutations were detected, were then prioritised for WGS to confirm a definitive result. Reflex testing results were generally available more quickly than WGS and were therefore used at times to facilitate more rapid public health responses, including enhanced or surge testing, and strategic decision-making.

401. WGS on its own was not sufficient to understand the emergence of new variants or to undertake risk assessments to inform policy responses. WGS was combined with other analyses, including how the virus was behaving in the population, to what extent it was outcompeting other established variants, or escaping previous immunity, and in particular, the clinical severity of the associated infection. Such analysis required detailed larger scale epidemiological sampling and analysis of clinical data sources. This data took time to assemble and assess.

402. Further information on WGS including its uses and strengths and limitations is set out in the 4 UK CMOs Technical Report on Covid-19 including at pages 25; 31 - 34; 127 – 136; and 200 – 203 [see MMcB7/021 – INQ000177534].

Advice on Testing Methods to Identify New Variants

403. NI virologists and public health experts participated in relevant UK wide fora where methods to identify new variants were discussed in detail, and decisions on the most appropriate methodology were made at a laboratory level without direct input from the Department. A high-level discussion of methodology, when relevant, took place at SAGE / NERVTAG and relevant PHA and Departmental Groups (EAG-T, SIG, Modelling Group).

404. Advice on testing methodology was provided by staff in the RVL who participated in relevant UK networks and were responsible for virus testing in NI. Detailed information on how methodology evolved in NI during the course of the pandemic may be best sought from RVL if considered necessary in order to assist the Inquiry further. Advice was provided on a continuous basis throughout the pandemic, as evidence emerged and variants evolved. This information fed into Departmental decision making where relevant and advice through myself and the CSA.

How Advice on Testing for Variants was Implemented

405. In NI, both WGS and at times reflex assay testing (genotyping) were undertaken on suitable samples identified in both Pillar 1 and Pillar 2 laboratories.

406. Reflex Assay testing and WGS of Pillar 1 samples was undertaken by the RVL working collaboratively with QUB. WGS of Pillar 2 samples was undertaken by QUB. Positive test samples were identified by the local Light House Laboratory (in NI this was Randox) and transported to QUB for WGS.

407. In line with testing across the UK laboratory network, reflex assay testing of Pillar 2 samples was undertaken by the local NTP Lighthouse Laboratory (Randox). Again, depending on sample suitability, positive test samples were identified by the local Lighthouse Laboratory and transported to QUB for WGS.

Wastewater Testing

408. Wastewater sampling (WWS) helped signal circulation of Covid-19 variants of concern and supported tracking lineages of Covid-19. It was not used as a primary resource for variant detection but was triangulated with other data. WWS began as an all-Ireland pilot in December 2020 across two sites. A full NI surveillance programme was initiated by DAERA commencing in April 2021 (32 wastewater treatment sites, 4 samples per week), with the Department leading the programme from September 2021. With a reduced budget, from August 2022, NI's WWS continued with sampling taken twice weekly across 24 treatment sites, until March 2023, when the Department formally closed the WWS Programme, with any ongoing surveillance then taken forward by the PHA under business-as-usual arrangements.

409. WWS was also helpful as it gave early warning of circulation of Covid-19 variants of concern. This sampling combined with WGS was used to inform targeted public health responses by the PHA, including for example targeted outbreak testing and assisting in the attempted containment of initial transmission of more transmissible variants.

410. WWS was delivered through collaborative working with a range of partners including the Department, DAERA, the PHA, QUB, the RVL and NI Water (the regional utility provider). The project was steered by a Programme Oversight Board [MMcB7/199 – INQ000531011] and delivered through an Operational Delivery Board.

When New Variants were Identified

411. Large-scale sequencing revealed that Covid-19 arrived in the UK by hundreds of separate introductions carried by travellers returning in large part from Europe after the half-term holidays in February 2020.

Alpha

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

413. In a statement on 23 December 2020, the Department confirmed a positive test for the new variant virus in NI (the Alpha variant). WGS analysis had been conducted on a small number of suspected NI cases, producing one positive result.

414. The Alpha variant drove a large wave of cases in the winter of 2020 to 2021. With the emergence of Alpha (and Beta which was detected in Southern Africa), significant effort was made to further expand sequencing and rapidly identify and characterise any other new variants arising across the UK, including in NI.

Beta

415. The Department issued a statement on 23 February 2021 announcing that three confirmed cases of the South African variant of Covid-19 (the Beta variant) had been detected in NI [MMcB7/200 - INQ000276606]. These were the first confirmed cases in NI.

Delta

416. By early 2021 there were emerging observations in India of potential new variants, with a significant surge in cases reported and increased hospitalisations. These variants were later classified as Delta and Kappa. In the UK, cases of Delta and Kappa were initially detected predominantly in those travelling from India. Initially, Kappa was thought to pose the larger threat however Delta began to exhibit a much more rapid growth rate outcompeting other established variants and went on to dominate globally in 2021, including in NI.

417. The Department issued a statement on 6 May 2021 [MMcB7/370 - INQ000382944] announcing that it had been notified by the PHA of seven confirmed cases of the Variant Under Investigation B.1.617.2 (India) Coronavirus variant in NI. These were the first confirmed cases of the Delta variant in NI.

Omicron

418. By November 2021 many countries worldwide, including the UK, were reaching their highest rates of WGS. Sequencing in Southern Africa and travel-related sequencing in Hong Kong allowed the rapid identification of a new variant of concern. This identified Omicron as soon as the first 4 sequences had been uploaded by Southern African researchers to the online sequence database GISAID (*Global Initiative on Sharing All Influenza Data* is a global science initiative established in 2008 to provide access to genomic data of influenza viruses). On 7 December 2021 the Department issued a press statement [MMcB7/201 - INQ000357319] announcing that the first Omicron Covid-19 variant cases had been confirmed in NI.

419. The large antigenic differences between Omicron and the wild type spike protein, combined with waning immunity in the population, resulted in poor neutralisation of Omicron by those previously vaccinated. This necessitated the rapid implementation of vaccine booster programmes to counter immunological waning associated with the establishment of this variant.

Test, Trace and Protect

420. The Department's TTP Strategy was approved by the Health Minister on 18 May 2020 [MMcB7/296 - INQ000381319 and MMcB7/035 - INQ000120704] and published by the Department on 27 May 2020. Importantly, the TTP Strategy set out the Department's strategic approach to this aspect of the pandemic response (testing, contact tracing and isolation), and it did not refer to a separate organisation or entity to be established by the Department to deliver the population level public health pandemic response in NI. Unlike other parts of the UK, in NI there were no separate organisational structures established for population-based contact tracing. Throughout the pandemic response the PHA, in keeping with its extant health protection roles and responsibilities, retained responsibility and operational leadership for testing and contact tracing, including the further development of the Contact Tracing Service and the systems of internal operational control within the service. As such the PHA would be best placed to provide further detail and information on the operational development, organisational structure, and process of implementation of the population level testing and contact tracing programmes in NI.

421. The Department established a number of working groups and advisory structures in the context of its strategic oversight of the population-level public health response in NI, as introduced at paragraphs 71 to 72. These included for example the EAG-T, the TTP Oversight Board and SIG. In addition, senior officials and professional staff from both the Department and the PHA participated in national expert advisory and working groups, which further informed the strategic and operational working groups charged with delivering the population level pandemic response in NI including in relation to TTI.

422. The purpose of the TTP Strategy was to set out the strategic approach to breaking the chains of transmission of the virus by identifying people with Covid-19, tracing people who may have become infected by being in close contact with those people, and supporting those identified to self-isolate so that, if they had been infected, they were less likely to transmit the virus to others. The TTP Strategy was designed to augment the other measures in place to help minimise community transmission of Covid-19 including, for example, NPIs such as: physical distancing; good respiratory and hand

hygiene; wearing face coverings in enclosed spaces; and the 'lockdown' regulations which set out, for example, restrictions on businesses and individuals to reduce population mixing in public spaces and the workplace. A list of those who contributed to the development of the TTP Strategy is set out at Appendix 1 to the document and includes key professional, technical and policy personnel from the Department and relevant professionals from the PHA.

423. The TTP Strategy signalled a programme of work to reduce the spread of the Covid-19 virus among the population in NI, minimising Covid-19 transmission in the community and, in doing so, preventing and limiting exposure to the virus and reducing the risk of serious illness. Its key elements were: early identification and isolation of possible cases, clusters and outbreaks of infection; rapid testing of possible cases; tracing of close contacts of cases; and early, effective and supported isolation of close contacts to prevent onward transmission of infection. The TTP Strategy had a population focus which set the context for implementation of robust public health measures appropriate to the prevailing risk and it was supported by an evolving digital infrastructure and an ongoing programme of public communications.

424. The TTP Strategy was initially referred to as 'Test, Trace, Isolate, Support' based on the pillars of testing people, tracing their contacts, advising cases / contacts to isolate, and supporting them to do so as appropriate. It changed relatively early in the pandemic to become known as "Test, Trace, Protect" to better reflect the need to provide people who had been asked to isolate with access to appropriate support mechanisms to protect others in the community, which was the fundamental objective of the strategy. As referred to previously, for example at paragraphs 606 - 608, DfC had the lead role in providing the support that was needed for those that were self-isolating, including financial support through its Discretionary Support Scheme. DfC would be best placed to provide further details of this scheme, should that be required to further assist the Inquiry.

425. The TTP Strategy was first developed and implemented at a stage in the pandemic when neither a vaccine nor specific treatments for Covid-19 were available and the disease was resulting in high rates of serious illness, hospitalisation and death among some of those infected. The TTP Strategy acknowledged that test, trace and isolate

would become a part of everyday life in NI until an effective vaccine was developed and a vaccination programme for Covid-19 was implemented. Identifying cases through widespread testing and isolating cases and their contacts was, in the absence of an effective Covid-19 vaccine and treatments, deemed by the Department as a necessary and proportionate response, given the consequences of the infection spreading in a population with no previous exposure or natural immunity (including those who were vulnerable), prior to the availability of sufficient vaccination and specific treatments for Covid-19.

426. The role and responsibilities of the Department, the PHA and other bodies with regard to the TTP Strategy are set out below in more detail and have been introduced at paragraphs 25 to 31, paragraphs 71 and 72, and paragraphs 91 to 97 . Delivery of the TTP Strategy and supporting policy in relation to testing, contact tracing and isolation, was kept under continuous review by the Department and was updated on an ongoing basis. Further details are set out in relevant sections on "Testing", "Tracing" and "Isolation".

Chronology of Decision-Making Meetings

427. The Department retained strategic policy responsibility for all aspects of test, trace and isolate as set out in the TTP Strategy, and this was kept under continuous review throughout the pandemic. The TTP Oversight Board, which I chaired, was ultimately accountable to the Health Minister. Strategic and policy decisions in relation to the TTP Strategy were made by the Health Minister. The normal process for a decision by the Health Minister was for officials to provide the Health Minister with a 'submission' detailing information, options if appropriate, and the advice and recommendation of officials.

428. The TTP Oversight Board met on a weekly basis from its first meeting on 12 May 2020 until 1 September 2020, and from 15 September 2020 met on a fortnightly basis [MMcB7/297 – INQ000535704]. The format of meetings followed a structured agenda [MMcB7/298 – INQ000535705]. The Board's role was to provide strategic oversight of both the contact tracing and testing programmes and to manage the interfaces, to oversee progress regarding operational development and delivery, and to provide

advice in terms of policy implementation, effectiveness and evolution. This advice of the TTP Board and its members was incorporated where relevant, together with other relevant expert evidence and advice, to inform recommendations and submissions to the Health Minister regarding key strategic policy decisions.

Strategic Cooperation and Coordination of Testing and Contact Tracing

429. The approach to strategic coordination of testing and contact tracing has been described at paragraphs 91 to 93. Collaboration and coordination between the Department and other groups and organisations involved in the Covid-19 pandemic response has been introduced at paragraphs 223-228 paragraphs 451, 456, 462, 484, 498 and 499, and paragraphs 583, 586, 595, 599, 603, 607 and 608. Further relevant detail is set out across the "Testing", "Tracing" and "Isolation" sections of this statement, this includes detail on how the TTP programme was delivered across NI and the role of other bodies, and comparison of testing, contact tracing and isolation in other nations.

430. The Department retained overall policy responsibility for TTI and maintained a strategic oversight role of the delivery of the TTP Strategy. As previously described at paragraphs 26, 27 and 30, the PHA was the lead body responsible for the operational delivery of both the testing and contact tracing programmes, working with a range of partners, and can best advise the Inquiry of the operational structures, implementation and the PHA organisational governance and accountability arrangements within the Contact Tracing Service.

431. In terms of the Department's governance and accountability structures, the TTP Oversight Board was established in May 2020 and had its first meeting on 12 May 2020. I chaired the TTP Oversight Board as the Senior Responsible Officer for the TTP programme of work. Where I was unable to attend a meeting given other demands, the Oversight Board was chaired by one of the DCMOs. Membership of the TTP Oversight Board is described at paragraph 95.

432. The Board's role is described above at paragraph 428 and, in summary, included providing strategic oversight of both the contact tracing and testing programmes,

recognising that the Covid-19 testing programme and contact tracing were key strategic elements of the pandemic response in breaking chains of transmission and reducing community transmission. This included the sharing of performance data, intelligence on clusters and outbreaks (from the PHA data and surveillance systems) and providing advice in terms of policy implementation and its effectiveness.

433. The interdependent programmes of Covid-19 testing and contact tracing required strategic coordination. Both programmes were closely linked and complex, and successful delivery was key to implementation of the TTP Strategy. There were significant logistical and operational challenges which overlapped with policy dimensions in both programmes. As described at the paragraphs immediately above, the TTP Oversight Board ensured an effective and efficient interface between policy and the PHA-led operational teams as the approaches to testing and contact tracing continued to evolve throughout the pandemic. The TTP Strategy was overarching, comprising testing, contact tracing and isolation. The numerous policy iterations in each of these respective areas and an overview of operational implementation structures are described in relevant sections of this statement on "Testing", "Tracing" and "Isolation".

434. The TTP Oversight Board's Term of Reference [MMcB7/022 – INQ000137363] set out its core purpose as:

"To oversee and coordinate the integrated programmes and workstreams which will collectively deliver on the NI COVID-19 'Test, Trace, Isolate, Support Strategy'. It will include traditional contact tracing, digital supports to contact tracing, proximity app, testing, public communication and engagement. The board will be responsible for signing off the strategy, approving finance requests, and overseeing the implementation of the strategy."

435. The Department considers a key benefit of NI's relatively small size is that key personnel across programmes of closely related work can come together more easily in delivery groups and, in this case, to comprise the TTP Oversight Board. While this undoubtedly contributed to a significant amount of sustained pressure of work and multiple demands on the same small number of individuals, it is the Department's view

that this feature greatly assisted strategic and operational delivery of the TTP programme and was key to ensuring alignment and synergy. This helped ensure that key considerations, situational awareness, and policy updates in a fast moving and uncertain environment were communicated efficiently to key personnel and, where relevant, were escalated for onward communication to teams and partners for implementation. The work of the TTP Oversight Board is a good example of this streamlined working and, in the Department's view and my experience, these arrangements helped ensure an effective and efficient interface between policy / strategy and the PHA-led operational teams as the approaches to testing and contact tracing continued to evolve. Members of the TTP Oversight Board were also members of other key groups linked to delivery of the TTP Strategy - for example the Department's EAG-T; the Clusters & Outbreaks group; NI SMART; Testing in Care Homes – Task and Finish Group; the Nosocomial Support Cell, and CSA also attended the NI Modelling Group and SIG. This cooperation and coordination again helped with the flow of information and strategic and operational alignment.

436. Strategic oversight of all aspects of work relating to the establishment and development of the Contact Tracing Service (including manual tracing, digital service, information governance and public communications) were brought together under the leadership of the TTP Oversight Board informed by the updates provided by the PHA and Departmental officials. This included strategic oversight of the scale up and utilisation of testing capacity, and the approach to communications to support delivery of the TTP Strategy. The establishment of the TTP Oversight Board ensured that the Department was able to seek and obtain assurance regarding delivery of the TTP Strategy, and to provide assurances and regular updates to the Health Minister and to the NI Executive on both the testing and contact tracing operational delivery programmes informed by the updates received from the PHA.

437. I established a Contact Tracing Steering Group on 1 May 2020 to oversee and support the PHA in the establishment of the Contact Tracing Service in NI and to provide strategic direction for its operation. The Steering Group reported directly to the Department. Dr Elizabeth Mitchell (a former DCMO in the Department) and Alistair Finlay were appointed as joint Chairs of the Steering Group. The remaining members comprised of officials from the Department, the PHA, BSO, the Patient and Client

Council, the NI Council for Voluntary Action (voluntary and community sector representative organisation), and local universities (QUB and UU). Dr Mitchell provided a weekly update on progress of the work of the Steering Group to the TTP Oversight Board [MMcB7/297 – INQ000535704] which I chaired. The key aims of the Steering Group were to:

i. Deliver an extensive and comprehensive Contact Tracing Service for NI;

ii. Confirm the service model to include traditional contact tracing and technology enabled elements;

iii. Oversee the recruitment of suitably experienced staff / volunteers; provide appropriate IT platforms to support the work; identify and secure resources and facilities for the service; and

iv. Identify appropriate governance, project management and administrative support for the service.

438. The Steering Group was stood down at the end of September 2020 when responsibility for the Contact Tracing Service in its entirety, its further development, and associated governance and accountability arrangements again transitioned to the PHA as part of normal business as a key health protection function. The Steering Group presented its closure report to the TTP Oversight Board at its meeting on 10 November 2020 [MMcB7/299 – INQ000535706]. Following the full transition of the Contact Tracing Service to the PHA, the PHA continued to report progress on the Service through the PHA Chief Executive to the Department and to myself in my role as chair of the TTP Oversight Board.

439. On 3 October 2020, I commissioned a Rapid Review of the contact tracing service (see paragraphs 541 to 544 and paragraph719). The Rapid Review, which reported on 12 October 2020, was undertaken by Dr Patricia Donnelly, HSC Leadership Centre Associate, and Dr Mitchell. The Review identified a number of areas for improvement and key actions to address these. Dr Mitchell chaired a newly established Programme Board within the PHA which was tasked with overseeing implementation of the system developments arising from the rapid review and to take forward the necessary actions

[MMcB7/300 – INQ000535707] By 12 October, Dr Mitchell had already commenced work on a detailed plan to implement recommendations arising from the rapid review for further consideration.

440. Dr Mitchell reported to the PHA's Chief Executive and also updated the Department through participation as a core member of the TTP Oversight Board. Dr Mitchell was later appointed on an interim basis as Director for the Contact Tracing Service within the PHA (from 6 December 2020), with responsibility for oversight of the service and development of all aspects of the contact tracing service going forward.

441. As set out in paragraph 424 above, DfC had the lead role in providing the support that was needed for those that were self-isolating, including the provision of financial support through the Discretionary Support Scheme. DfC colleagues were members of the TTP Oversight Board and first attended on 19 May 2020. DfC would be best placed to assist the Inquiry with further detail on the operation of the Scheme and DfC's range of further work to support those isolating, including with other partners such as local government councils.

442. In terms of its evolution, the TTP Oversight Board continued to meet regularly during the period May 2020 to February 2022 under its original remit and terms of reference. [MMcB7/022 – INQ000137363]. Later in April 2022, the Board's Terms of Reference were updated [MMcB7/036 – INQ000137364] to oversee implementation of the Covid-19 Test, Trace and Protect Transition Plan [MMcB7/059 - INQ000348966].

Digital Services Provided with TTP

443. Digital services to support delivery of the TTP programme are described in detail at paragraphs 208 to 210, 249 and 291, and throughout the section on "Tracing".

TTP Informed by Covid-19 Testing Strategy

444. The TTP Strategy was informed by the Department's Covid-19 Testing Strategy, which was first issued on 6 April 2020 and, due to the fast-paced nature of events, an updated Covid-19 Testing Strategy was issued on 21 May 2020. Both strategies have

an explicit focus on the need to rapidly scale testing capacity to support contact tracing. Furthermore, the strategic approach of both strategies remained fully aligned for example as changes were made to the recommended isolation period, with the introduction of new testing approaches such as LFDs, and the use of a negative test to allow a person to no longer isolate. The TTP Oversight Board was an important vehicle to achieve that alignment.

445. A small number of key Departmental officials, including myself, the CSA and DCMOs, were involved in the development and approval process for both the Testing and TTP strategies which helped ensure this alignment. Furthermore, the Chair of the Department's EAG-T was a member of the TTP Oversight Board and provided regular updates in relation to key testing issues. Similarly, the co-chair of the NI Contact Tracing Service Steering Group was a member of the TTP Oversight Board. Representatives from the PHA-led Epidemiology Cell also attended. This alignment, and the close joint working between the PHA (from an operational perspective) and the Department (from a policy perspective) was, in the Department's view and in my experience, beneficial in making best use of expertise and experience given the demands on a small number of key individuals.

446. The processes through which TTP was delivered across NI have been described across the relevant sections in relation to "Testing", "Tracing" and "Isolation" and this includes, where relevant, detail on the involvement of other Ministers, Departments, the PHA, HSC Trusts and local government councils.

447. A comparison with the functionality and services provided by the other UK nations' and the RoI's contact tracing models is addressed within the "Tracing" section of this statement.

Tracing

Development, Evolution and Implementation of Contact Tracing Services Delivery Model

448. People in close contact with someone who is infected with a highly infectious virus, such as the Covid-19 virus, are at higher risk of becoming infected themselves, and of potentially infecting others. Identification of and provision of advice to contacts after exposure to an infected person will assist contacts through providing appropriate public health advice to prevent further transmission of the virus and where appropriate to access care and treatment. This monitoring process is called contact tracing.

449. The overall aim of the Contact Tracing Service in NI was to assist in reducing community transmission and the number of people with Covid-19, and as a result to prevent severe disease, hospitalisations and deaths from the virus and to help alleviate the associated pressures on the HSC's capacity.

450. For a highly transmissible virus such as Covid-19, contact tracing is most effective when the prevalence of the infectious disease and the number of cases are relatively low; when positive cases are contacted within 24 hours; and their close contacts within 48 hours of notification to the contact tracing service. Contact tracing was one of a number of public health measures used in NI as part of TTI policy to help control the spread of Covid-19.

451. Contact tracing is an integral part of the public health response to the outbreak of any infectious disease and is normally managed operationally by the PHA. This remained the case throughout the pandemic response. It is the case however that NI had never before undertaken community testing and contact tracing at the scale undertaken during this pandemic or indeed for the duration that was required. 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. The normal scale of the contact tracing function carried out by the PHA pre pandemic under its Health Protection remit and responsibilities was an effective way of combatting the spread of disease under normal circumstances (for example the transmission of

tuberculosis or meningitis), it was never intended to address an outbreak on the scale of Covid-19. The PHA, with the support of the Department, had to respond at pace to design and deliver a service that could manage unprecedented numbers of cases in a very short period of time.

452. As in the rest of the UK, the PHA were undertaking contact tracing for all cases of Covid-19 until 12 March 2020. This involved the PHA conducting contact tracing on a case-by-case basis as part of its normal business as usual Health Protection function using their established expertise in risk assessment of incidents and outbreaks. This was the approach to contact tracing when the first Covid-19 positive case was confirmed in NI on the 1 March 2020. Prior to 12 March, there was a relatively small number of confirmed cases and therefore contact tracing had the potential to have a significant impact on the course of the pandemic and in delaying community transmission. In mid-March 2020 the levels of community transmission were higher in the UK including NI which meant, in general terms, the impact of contact tracing as an effective mitigation to help break chains of transmission and reduce spread was likely to be less. Further, the true level of community transmission at this time was not known due to constraints on testing capacity and was likely to be much higher.

453. As described at paragraph 86 community population-based contact tracing was paused following the policy decision taken at COBR (M) to move from the containment phase to the delay phase on the 12 March 2020 with the move to wider population based public health measures and advice. At that time, contact tracing was then restricted to high-risk contacts such as residents in care homes or patients in hospital.

454. Without timely access to tests, due to limitations on testing capacity at that time, infected people might not be rapidly identified and contact 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. 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 also

reflected in the UK CMO Technical report on the Covid-19 pandemic in the UK (Chapter 7, pages 212-232) [MMcB7/021 – INQ000177534].

455. Community contact tracing in NI remained paused from 12 March 2020 until reintroduced on 27 April 2020 through a pilot phase, with the full launch on 18 May 2020. Following the pause in March 2020, the PHA commenced planning in early April for the reintroduction of contact tracing. NI was the first part of the UK to re-establish a contact tracing service following the pause. During the pilot phase the processes and systems required for contact tracing were developed, tested and refined using staff mainly redeployed from other areas of the health and social care system. In parallel, work was being taken forward by the Contact Tracing Steering Group (see, for example, paragraph 87 and paragraphs 437 - 438) from early May 2020 to prepare for the reintroduction of contact tracing including in areas of recruitment; supporting IT platforms; developing call handling scripts; accommodation; staff training requirements; funding requirements; data sharing and a governance to plan for the Service proper implementation. Lessons learned from the pilot phase were factored into the design of the Contact Tracing Service prior to its relaunch. The PHA will be able to provide further details of this work if this would be of assistance to the Inquiry.

456. There was a wide-ranging programme of engagement with stakeholders undertaken by PHA during the Contact Tracing Service development stage. This included engagement with political parties; the Human Rights Commissioner for NI; the Equality Commission; the NI Commissioner for Children and Young People; the Older Peoples Commissioner; and representatives from potentially hard-to-reach groups including the homeless population and the Roma community. As described at paragraph 97, an Action Plan was subsequently developed by PHA for hard-to-reach groups, including vulnerable groups and the BAME (Black, Asian and Minority Ethnic) population, to assist in its approach to further encourage adherence to TTI advice for example as part of the response to outbreak incident management. The Plan was shared with the NI Executive on 2 September 2020 [MMcB7/037 – INQ000375903 and MMcB7/ 038 - INQ000375902]

457. From the date of recommencement on 18 May 2020, the Contact Tracing Service was established with the aim to contact all people who received a positive test result in

order to provide them with advice (as positive cases) and to identify and trace all their close contacts. In May 2020 SAGE estimated that at least 80% of the contacts for each case identified needed to be traced within 48 hours for the system to be effective. When re-established on 18 May 2020, the PHA maintained contact tracing throughout the pandemic; though at times of very high prevalence the efficiency of the service was in all likelihood reduced and the impact, in terms of reducing transmission, will have been much less. The maintenance of the Service was important in terms of public messaging, perception and confidence.

458. The decision to recommence contact tracing in May 2020 was taken at a phase in the pandemic when there was no vaccine or specific treatments available. In combination with other NPI's the purpose of the Service was to interrupt chains of infection to reduce community transmission. As already described, the overall aim of the Service was to assist in reducing the number of people with Covid-19, and in turn severe disease, hospitalisations and deaths from the virus. The Service also aimed to help alleviate the associated pressures on the HSC's capacity. At that time this was in combination with the other NPI's and was considered a necessary and proportionate response to the pandemic, given the consequences of the virus spreading unchecked in the population. In a statement to the NI Assembly on 28 July 2020 [MMcB7/301 – INQ000276488] the Health Minister reiterated that the establishment of an effective contact tracing service was a key priority for him. Contact tracing also helped the transmission of Covid-19 in NI to be understood by the population, increasing an awareness of risk. The Health Minister informed the NI Assembly that there was a strong international consensus that this work was a critical measure for bringing down the value of R, and thereby preventing or minimising further waves, whilst allowing other restrictions to be lifted in due course.

459. The Contact Tracing Service was mostly staffed by healthcare professionals including nurses, doctors and medical students. The Department understands that this was different to the staffing models across the other UK nations. The Service evolved from a person-led model at the outset of the pandemic whereby contact tracing staff contacted the person who had tested positive, to a hybrid model which utilised health care expertise together with newly developed technologies including a symptom checker App, a Proximity App and a digital self-trace solution. Further detail on the

use of technology and digital to support contact tracing is explained at paragraphs 481-509 below.

460. The decision to root the Contact Tracing Service in the PHA was an important one. In doing so, the Department consciously and deliberately connected the Contact Tracing Service into an organisation which already had the Health Protection Function and as part of that function, already undertook contact tracing as a routine part of responding to public health incidents and outbreaks, hence aligning with existing required experience and expertise.

461. The PHA advised the Department that Enhanced Contact Tracing (ECT), sometimes referred to as reverse contact tracing, was implemented by the Contact Tracing Service on 16 November 2020. This approach was aimed at securing additional information on the potential source of a case's infection and added to surveillance and situational awareness regarding outbreaks and chains of transmission. It involved asking all positive cases what settings they had visited and what contacts they had had over the seven-day period prior to onset of their infection. ECT was in addition to core contact tracing, which focused on identifying the close contacts of new cases in the period from 48 hours before symptom onset (or 48 hours before the positive test result if asymptomatic), however it was resource intensive and difficult to sustain when the numbers of people testing positive were high. ECT also informed the Clusters and Outbreaks reports that the PHA published weekly (see paragraph 535 below). The Department understands that ECT operated across the UK and in the RoI.

462. In NI, like the other UK nations, venues gathered relevant information on staff, on customers and attendees to support contact tracing if required. The Department developed guidance for the NI hospitality sector on the maintenance of customer and staff logs which came into effect on 7 August 2020. The guidance was developed through engagement with the hospitality sector through DfE [MMcB7/302 – INQ000535708 and MMcB7/303 – INQ000535709].

463. The Department's updated Test, Trace and Protect Transition Plan [MMcB7/059– INQ000348966] was published on 24 March 2022 and signalled a then more proportionate and targeted approach to testing and contact tracing, given the reduced

risk posed by the virus to the general population at that stage as a result of increasing population immunity from vaccination and previous infection and new drug treatments all of which had weakened the link between infection and the risk of severe disease (further detail on the Transition Plan is at paragraphs 163 to 166). In line with the Plan, the Contact Tracing Service was phased out from 22 April 2022 and was formally stood down at the end of June 2022. From 22 April 2022, contact tracing ceased in the wider community and the service focused on contacting and providing advice to positive cases providing public health advice in line with the extant guidance at that time, and to any household members of positive cases who are eligible for Covid-19 treatments (signposting to the NI Direct service) and to household members who were Heath and Care Workers (signposting to extant HSC guidance) [MMcB7/304 – INQ000348848].

Escalation of the PHA Contingency Plan

464. In relation to further development, implementation and evolution of the Contact Tracing Service, in December 2020, to mitigate the expected rise in the number of Covid-19 cases in the coming weeks, the PHA developed its Contact Tracing Service Contingency Plan. The Plan was considered and approved by the Test, Trace, Protect Strategic Oversight Board on 22 December 2020 [MMcB7/305 - INQ000437821]. The Health Minister agreed the proposed Plan on 24 December 2020. The Plan was based on the PHA's Framework for Escalation and Prioritisation of Resources and was revised and updated by the PHA throughout the pandemic [MMcB7/306 – INQ000535710 and MMcB7/307 – INQ000552986]. The purpose of the Contingency Plan was to set out how contact tracing resources were to be used differently and most effectively to manage situations of significant increased demand ensuring that the most high-risk situations were prioritised in order to deliver maximum public health impact from the contact tracing resource. The PHA kept the Contingency Escalation Plan under review throughout the pandemic and it was subject to change.

465. Operational contingency measures included for example an increase in targeting the public uptake and use of Digital Self Trace (more detail on this function is set out at paragraphs 507 – 509 below); a pause or stop to ECT; prioritisation of positive cases by dealing with each new day's cases first and then focusing on cases within 72 hours

of reporting, and the mobilisation of trained PHA / HSCB staff as additional contact tracers.

466. The Contingency Plan was first implemented by PHA over the 2020 / 21 Christmas and New Year period in anticipation of significant increases in index cases and contacts, with just under 12,000 cases notified to the system in the 7 days between 28 December 2020 and 3 January 2021.

467. Further planned contingency arrangements were noted by the Health Minister on 19 July 2021 [MMcB7/308 – INQ000535711], again in response to modelling which indicated a significant rise in case numbers driven by the Delta variant within the younger population. At this time, as a further evolution in relation to implementation of the Contact Tracing Service, a revised service delivery model was developed by the PHA involving a significant expansion of the Contact Tracing Service workforce through the HSC Workforce Appeal, and redeployment of internal PHA staff. As part of this new model, a new Health Technician Contact Tracer role was introduced by the Contact Tracing Service (HSC Agenda for Change Band 4 level). This change facilitated the introduction of a new triage system whereby a senior contact tracer (HSC Agenda for Change Band 6 level), using a range of live intelligence systems and dashboards available to the Service, was able to allocate cases to the contact tracing staff. The more complex cases with a higher risk profile were progressed by Band 6 contact tracing staff and the less complex cases were allocated to the new Band 4 technical grade staff. This approach is similar to that taken in some other clinical settings where the most experienced and skilled staff review the workload before it is allocated to the most appropriate level of staff, helping ensure the most effective and efficient use of available skills and expertise. Further detail on the contact tracing staffing model adopted by the PHA is set out in paragraphs 470 to 480 below.

468. On 18 November 2021, the Health Minister was advised that the Contingency Plan was being escalated to Red Status with immediate effect following a 23% increase in the number of confirmed cases over the previous 7-day period [MMcB7/309 – **INQ000439051** Further detail on escalation of the Plan is set out at paragraph 533 below.

Telephony Tracing Services and Workforce

469. Telephony contact tracing in NI was conducted by the PHA using outbound calling to people who had tested positive for Covid-19, taking them through a structured interview to determine their close contacts and then attempting to call those contacts in the first instance to advise them to isolate in order to break potential chains of infection.

470. There were differences across the 4 UK nations' approach to contact tracing, including differences in staffing models. In NI, the Contact Tracing Service was mostly staffed by healthcare professionals such as nurses. This was different to the staffing model across the other UK nations and the Department understands this approach was unique in the UK. This professional input was in my view vital in helping to contain the spread of the virus for example through conducting risk assessments and managing what could often be complex cases involving clusters and outbreaks. High-risk settings and large outbreaks were risk assessed by the clinical team with oversight by the public health consultant, with more complex situations managed by the core health protection service. In many instances, this professional led input was also of benefit in providing advice and support to those experiencing extremely difficult personal and family circumstances including bereavement and the hospitalisation of family members. In my view this was a key strength of the PHA Contact Tracing Service.

471. As case numbers rose in spring 2020, staff from other backgrounds were recruited into the contact tracing service from other parts of the health service and existing PHA staff were redeployed and trained as contact tracers. In addition to these core staff, some staff were also retained on an "on call "or "bank" basis to supplement operational capacity as required.

472. Separate teams within the PHA supported care homes, schools, early years and some other settings, working with the Contact Tracing Service as required. The person-led, manual element of the Service was complemented and enhanced by a number of innovative digital solutions (see further detail at paragraph 481 below). The advent of these digital solutions meant that, particularly in periods of peak demand, often the primary response was digital. This in turn freed up staff to make and receive calls to

investigate complex cases and support those who were unable to utilise the digital platform.

473. The flexibility of a locally designed and delivered in-house system within the PHA also enabled the Contact Tracing Service to make operational service delivery changes swiftly and with agility, for example following activation of its Contingency Plan at times of increasing and extreme demand. The Department was advised and assured that the PHA's workforce planning model for the Service was based on the ability to flex staff should the number of cases increase or decrease substantially. The staffing numbers for the Contact Tracing Service fluctuated during the pandemic in response to the trajectory of the virus. For example, a snapshot of the staffing complement based on management information provided by the PHA during the pandemic shows that in July 2020 there were approximately 90 trained staff. This increased to 169 whole time equivalent contact tracers (246 headcount) in February 2022 [MMcB7/310 - INQ000346696]. Again, based on management information from the PHA, the number of hours undertaken by contact tracing staff peaked at a total of 31,975 hours in January 2022, in comparison for example to 12,381 hours undertaken in October 2020.

474. The PHA was requested to keep the Department informed of efforts to manage and to increase staffing complement, for example through regular update reporting to the TTP Oversight Board [MMcB7/311 - INQ000535713] and ad hoc discussion and correspondence. The Department and the Health Minister also provided updates to the NI Executive [MMcB7/312 - INQ000375892] and to the Health Committee as requested.

475. Based on management information provided by the PHA, at the commencement of its operation in May 2020, the Contact Tracing Service had a total of 60 trained staff including full time, part time and bank staff employees. The table below is based on management information provided by the PHA to the Department during the pandemic and provides an outline of staffing numbers (trained staff) in the period May 2020 to February 2022.

Table - Number of Trained Contact Tracing Staff

Date	Number of Trained Contact Tracing Staff
18-May-20	60
09-Jul-20	91
10-Aug-20	101
19-Oct-20	194
30-Nov-20	277
19-Jan-21	339
16-Feb-21	320
02-Mar-21	317
23-Apr-21	281
14-May-21	275
18-Jun-21	252
02-Jul-21	249
16-Aug-21	196
24-Sep-21	225
29-Oct-21	221
19-Nov-21	227
17-Dec-21	251
14-Jan-22	246
25-Feb-22	246

476. The Department understands that staff were required to complete mandatory training within one month of joining the Contact Tracing Service. A Quality Manager also identified and collated common training needs and emerging themes on a weekly basis to address any gaps in learning, and in addition a call coaching system was in place to assure and improve the quality of calls delivered.

477. The PHA retained lead responsibility for operational delivery of the Contact Tracing Service and is best placed to assist the Inquiry should it require further details in relation to service planning, actual staff complement numbers, sourcing and

recruitment, utilisation and monitoring of staff numbers, and training of contact tracers and contact centre staff.

478. In relation to contact tracing capacity, the CSA provided advice to the PHA on three occasions around the required size of the service. On 20 April 2020, the CSA estimated a need for 300 – 600 contact tracing staff would be required in NI and was assured that over 500 were in training [MMcB7/313 INQ000353669]. Based on the European Centre for Disease Control (ECDC) estimates from April 2020, this would have been sufficient for a contact tracing service to handle over 1000 cases per day [MMcB7/042 - INQ000346697]. On 13 May 2020, the CSA provided further advice to the Contact Tracing Steering Group meeting that in his view there would be up to 500 cases per day with a requirement to trace 5,000 people per day. On 17 September 2020 the CSA met with the PHA and again indicated that the contact tracing service needed to be able to manage 500 cases and 5000 contacts per day [MMcB7/314 INQ000353671]. The advice from CSA was based on modeling undertaken by the NI Modelling Group, and the scientific consensus that once community transmission was at an extremely high level the impact of TTI on transmission would be limited.

479. As described at paragraph 673, despite the advice previously provided, the PHA indicated at the meeting with the Department on 17 September 2020 that their current business case for the contact tracing service was on the assumption of 50 cases per day. Following a period of ongoing discussion and correspondence with the Department, an updated draft business case was subsequently submitted by the PHA to the Department for consideration on 3 November 2020 taking account of the CSA advice. The final business case, as approved by the Department, gave the PHA authority to flex the contact tracing service depending on the extent of virus transmission. Efforts by the PHA to recruit additional contact tracing staff was ongoing in the interim pending development and approval of the business case. Throughout this period, the PHA had been advised by the Department that funding approval and resourcing would not and should not be regarded as an impediment to an appropriately staffed contact tracing service model [MMCB7/314 - INQ000353671]. This advice was also provided verbally by the Department to PHA colleagues.

480. As described in paragraph 478, the CSA provided advice as to the number of contact tracers who would be required in NI, based on best international practice, although the PHA ultimately decided on a different and smaller scale model, employing fewer contact tracers.

Digital Developments to Support Contact Tracing

481. The person-led element of the Contact Tracing Service was complemented by a number of digital solutions including: the digital self-trace platform; a texting service; the StopCOVID NI App; the COVID Care App NI; and the internal PHA Contact Tracing Platforms. All of these component parts contributed to the overall efficiency of the Service. A report illustrating the scope of the digital, largely self-contained but aligned, suite of products supporting Test, Trace, Protect and their performance was provided to the Department's Top Management Group in November 2020 [MMcB7/315 **INQ000574184**].

Development and Rollout of the StopCOVID NI Proximity App

482. In April 2020, as part of the wider Departmental and HSC efforts to address the impact of the pandemic, the Department's Chief Digital Information Officer (CDIO) convened a "Digital Co-ordination Cell" to oversee the digital response to Covid-19 in NI. The development of the StopCOVID NI Proximity App (the 'Proximity App') was one of the products of the Cell and was launched as part of the NI TTP Strategy. The TTP Strategy included an explanation of how mobile phone-based Proximity Apps could assist with Contract Tracing. Detail on the Proximity App was provided in a paper to the NI Executive on the Options for Digital Contact Tracing [MMcB7/316 - INQ000130398]. The Health Minister notified the NI Executive of progress on developing a NI specific Proximity App on 11 June 2020 [MMcB7/317 - INQ000120718. The Health Minister subsequently informed the NI Executive of the planned launch of the Proximity App and provided details of the features of the app and cases to illustrate its use [MMcB7/318 - INQ000130399 and MMcB7/319 - **INQ000317480**

483. The Department led the development of the Proximity App which was launched in NI on 31 July 2020 for those aged 18 or over [MMcB7/281 – INQ000373403]. This was the first Exposure Notification App to launch in the UK, the first globally to achieve international interoperability and, from October 2020, the first to be approved for use in post primary aged school children.

484. The Department announced on 14 August 2020 that the Proximity App had had more than 250,000 downloads during its first two weeks of operation. It was evident to the Department from information considered by SAGE and published on GovUK [MMcB7/320 - INQ000276295] and the conclusions reflected in the minutes of the SAGE Subgroup meeting of 16 April 2020 [MMcB7/321 – INQ000370969] that breaking the chains of Covid-19 transmission in the post-primary age group could help reduce overall prevalence. Therefore, building on earlier work with the Information Commissioners Office (ICO) in design and deployment of the app, officials engaged with the ICO and the NI Commissioner for Children and Young People (NICCY) to design and agree an age-appropriate process for extending use of the app to the post primary age group. The Department announced on 1 October 2020 that the Proximity App was available to 11-17-year-olds and was the first region in the UK to extend use to this age group. Design of this version of the Proximity App included consultation with 11–17-year-olds [MMcB7/322 - INQ000276296]. This was considered to be an important boost in the response to the Covid-19 pandemic. It was believed that the Proximity App would help schools, further education colleges and universities to provide additional protection to their students and staff.

485. An overview of the work to produce the StopCOVID NI Proximity App was published on the Department's website [[MMcB7/323 – INQ000137418]. This set out for example background to the delivery of the app; consideration of the potential use of the NHS England app and consideration of privacy concerns in relation to that app; consideration of interoperability, and procurement options.

Downloads of the NI Proximity App

486. The Proximity App was downloaded 679,456 times during its operational life from June 2020 to April 2022, in the context of an NI population of 1.93 million. Download data is

only available to the Department in this high-level format (see also paragraph 500 below). It is not possible to confirm that this was unique downloads as people may have deleted and reinstalled on the same or replacement phones. The Proximity App delivered 97,248 notifications to self-isolate which contributed to reducing transmission and achieved an average notification ratio of 2.46 close contacts for every positive index case reported.

Timing of the Development and Implementation of Apps

487. The Proximity App was delivered at great pace, and it is the Department's view and my professional view, that it would not have been feasible to deliver this any sooner in NI given the significant development and testing required, including the need to ensure interoperability within the rest of the UK and with the RoI. The timing of the development and implementation of other apps or digital services in NI was driven by the needs of the HSC organisations to support the response to the Covid-19 Pandemic. These included for example the implementation of the centrally provided Covid-19 Certification Service that enabled NI citizens undertaking international travel to meet the requirements of destination countries without placing undue pressure on GPs and vaccination centres to provide confirmation of vaccination status.

Consideration of the NHS England App

488. The Department did initially consider the adoption of the NHS England app, which was scheduled to be launched on 18 May 2020 subject to testing on the Isle of Wight. Initially the Department thought that the NHS England app could have been deployed quickly in NI, with minimal development costs and delay, however, following more detailed review, a series of technical difficulties were identified in adapting it. This included the significant differences in the health and social care IT infrastructures of the NI HSC and NHS England. In addition, concerns were raised by human rights and civil liberties groups over the proposed use by the initial NHS England app system of a central, personal data repository. The originally proposed NHS app was not compatible with the app which was developed by the RoI, which was an important consideration given the shared international land border.

Functions of the NI Proximity App and Comparison with Other Nations

489. The main function of the Proximity App was that it aimed to alert citizens anonymously that they were at risk from acquiring the virus. The Proximity App enabled smartphone users to be alerted to being in close proximity to another person who had subsequently tested positive for Covid-19. It could also alert others if the user of the app had subsequently tested positive for the virus. This meant that people were alerted to the risk of transmission of the virus and could begin to take steps including self-isolation to help prevent its further spread.

490. The Proximity App operated by sending anonymous alerts to people via Bluetooth when they had been in close contact with someone with a positive test. It augmented the traditional public health approach to contact tracing, by identifying close contacts automatically and finding people at risk of infection who would be impossible to identify through the interview method (for example on public transport) and accelerating the process to get advice to those at-risk individuals. The Proximity App also had the further advantage of enabling manual tracers to focus on the more challenging and complex cases.

491. A further modification to the Proximity App was launched in November 2020, with a feature added enabling the app to confirm the date when a user's self-isolation period would end. Between 1 August 2020 to 31 May 2021, 15,057 citizens uploaded a positive test result into the Proximity App, resulting in 41,821 self-isolation notifications being issued to the close contacts of those uploading a result. The Proximity App complemented manual contact tracing service particularly on the 'lead-time' in issuing a notification to a close contact.

492. People used the app less during Wave 3 which commenced around November 2021. Although PCR testing was still taking place including in secondary care settings, self-administered LFD testing became the mainstay of community diagnosis and the basis for self-testing and rapid testing by citizens and venues. This change disrupted the app's contact notification operational model, which had depended upon PCR test result notifications emanating from the Central Test Registry. The app was placed in

"maintenance mode" and continued to support the Test, Trace Protect Strategy, but no further development work was undertaken.

493. A formal comparison of features and functionality of the other nations apps has not been undertaken by the Department. As described in paragraphs 494 – 496 immediately below, a key feature of the NI Proximity App was its interoperability with those apps deployed in the UK and the RoI.

Proximity App Interoperability and Data Privacy

494. To ensure the required interoperability with the RoI, NHS England and Scottish proximity apps, and that NI citizens would need only install and use one app, it was agreed that the NI app should use the Google/ Apple design model. This was announced on 18 June 2020. Interoperability with those in the UK and RoI was a key feature of the Proximity App.

495. The ability of the Proximity Apps in NI and RoI to communicate with one another was an important factor in the management of cases in border areas, facilitating the exchange of non-identifiable exposure information across the border to protect the population on the island of Ireland and in my professional view was key to promoting the use of the Proximity App.

496. The emergence of an international standard for "proximity app" detection and interchange of information mechanisms drove the convergence of all jurisdictions (UK, RoI and EU) to adopting a similar interchange model, with back-office information processes tailored to their healthcare ICT infrastructure. The Proximity App was an early adopter of the Google / Apple supplied mechanisms (covering the majority of mobile phones in use) and therefore was fully interoperable with all other UK apps, the RoI app and apps across the EU.

497. A StopCOVIDNI Expert Advisory Board was constituted during the development of the StopCOVID NI Proximity App to ensure public concerns over privacy, security and accessibility were addressed, despite the urgency of the need to develop the app. A copy of the Terms of Reference of that group is provided [MMcB7/324

INQ000574185]. Information regarding the Proximity App was also published on the Department's public facing external website [MMcB7/323 – INQ000137418].

Cooperation with other Nations in the Development and Implementation of the App

498. While I was not directly involved given other responsibilities, I was aware that the Department worked collaboratively with the other UK regions and the RoI in developing the Proximity App. For example, the Department cooperated with its IT counterparts in NHS England, NHS Scotland and NHS Wales regarding the use of smartphone proximity apps as part of an informal four nations IT collaboration group. Decisions taken by the Department on technical aspects of the app, including the use of the Google / Apple based Exposure Notifications Application Programming Interface, was informed by these conversations.

499. Pre-pandemic informal arrangements existed through which the digital service leaders across the 4 UK nations were in communication with each other, with similar arrangements in place between NI and RoI. I understand that these pre-existing relationships increased the effectiveness of the engagement between the Department and respective authorities in the other nations, including in development of the Proximity App. As the complexity of the overall task to deliver a co-ordinated, interoperable digital response to the pandemic across the UK, RoI and Europe intensified, the disruption to normal modes of operation presented a challenge with people and agencies taking on disparate roles. My professional experience was that all worked collectively to address these challenges. The Department is not aware of a UK-wide Test and Trace Board and did not engage with such a board in development of the Proximity App.

Equalities Considerations and Demographic Detail of Users

500. Use of the Proximity App was voluntary and was dependant on possession of a compatible phone. Whilst basic download and phone type information was collected from the Apple/ Google Stores no demographic information was collected. An undertaking was made to key stakeholders prior to the launch of the Proximity App to limit the data collected to help address any privacy concerns. A copy of the

Department's Data Privacy Impact Assessment and the response from the ICO is provided [MMcB7/325 – INQ000535714 and [MMcB7/326 – INQ000535715]. No demographic or use data was collected.

501. While out with my professional technical competency, it is my understanding that the Department's digital products were subjected to accessibility testing, and online resources enabled 'Google Translate' and audio description which assisted with accessibility and use, for example for those where English was not a first language and for those with a hearing impairment.

The COVID CareNI App

502. Digital public health guidance was provided to members of the public in NI who were isolating via a separate App – the COVIDCareNI App. The Department commissioned the COVIDCareNI App which was designed and delivered in 14 days and was launched on the 30 March 2020. This was the first Health and Social Care service provided regionally using a smartphone app. The COVIDCareNI App provided a symptom checker for individuals with symptoms, and also allowed citizens to access guidance if they were isolating without symptoms due to advice from the contact tracing service or a StopCOVID NI Proximity App prompt when this was established. When an individual entered symptom details that indicated they may be suffering from Covid-19, the COVIDCareNI App linked through to tailored guidance to support isolation. The App was the first symptom checker launched in the UK and second in the world (three days behind the US CDC App – developed by Apple). The diagnostic algorithm was based on a call script developed and deployed on the NI 111 Pandemic Helpline (the UK 111 line which operated in NI under agreement with the national provider).

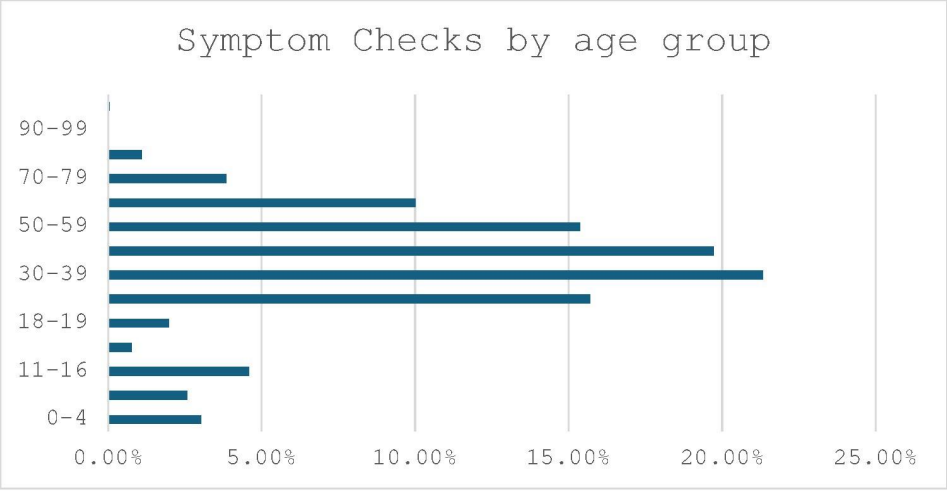
503. The introduction of the COVIDCareNI App had a significant impact on the NI 111 Pandemic Helpline, and on referrals to clinical services. The helpline initially managed over 6,000 daily calls with many being referred onward however, after the introduction of the App, this dropped to below 1,000 calls. The COVIDCareNI App managed 6,000 daily citizen journeys during the peak of the pandemic, demonstrating a clear digital shift. Only thirteen per cent of those checking Covid-19 symptoms were

recommended to seek clinical assessment which contributed to alleviating pressure on front-line health services. The fall in daily calls to the NI 111 Pandemic Helpline was also accompanied by a drop in demand for GP and GP out-of-hours services that were also stretched at this time.

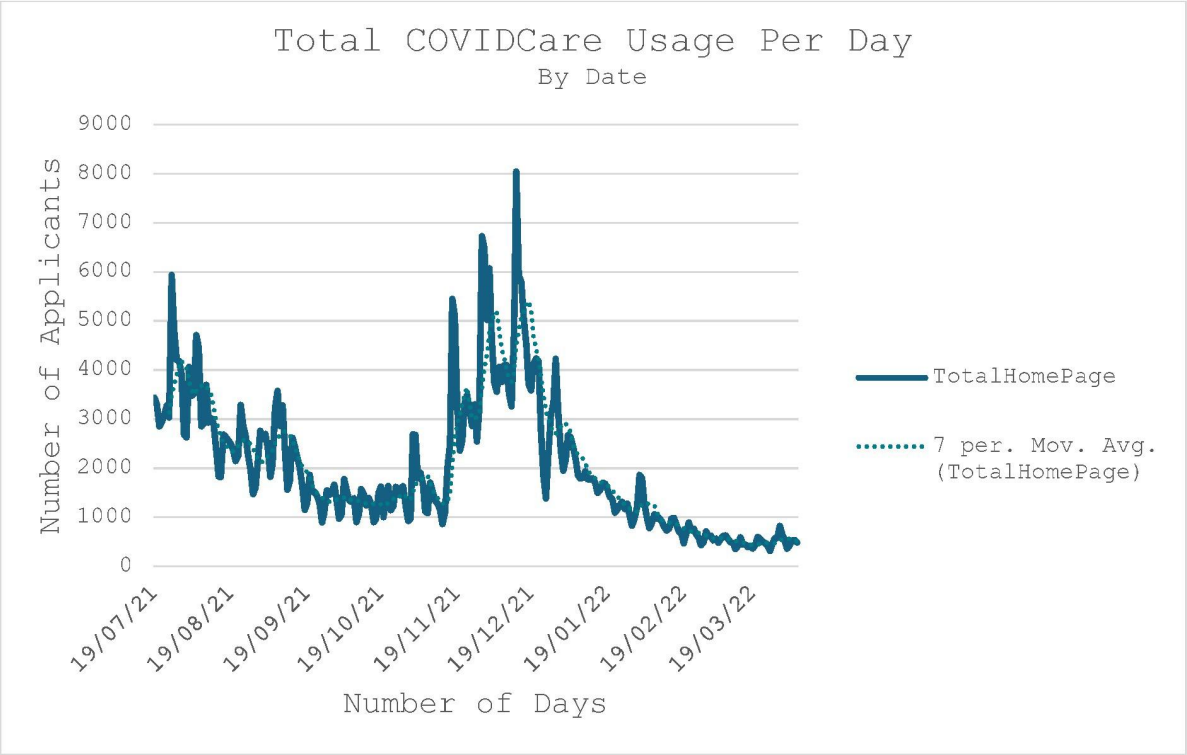
504. A range of accessibility options and requirements were addressed in relation to telephony services. This included the British and Irish Sign Language services that would assist citizens with a hearing impairment to use the NI 111 Helpline via video call and translation service. Importantly, low-income households in NI were able to avail of the national agreement with mobile phone network operators to not charge bandwidth for individuals accessing NI health and care services over the internet, and free to call the 111 number from their phones [MMcB7/327 – INQ000000000].

505. Unlike the StopCOVID NI Proximity App, high level demographic COVIDCareNI App data on age bands was required for the app risk algorithm to enable the provision of appropriate advice. This is displayed below at Graph 1. Information regarding usage (hits on home page) between July 2021 and March 2022 was also captured and is set out at Graph 2 below.

Graph 1 - Symptom Checks by Age Group



Graph 2 – Total COVIDCare NI Usage



506. Recognising that some members of the community were unable or unwilling to use smartphone apps to access services, the same guidance available via the COVIDCareNI App was available via the COVID CareNI Helpline. A key purpose of the helpline was to provide an accessible telephone service for citizens in NI who were unable to use the digital platforms. The COVID Care NI service was launched on 15 July 2020 and ran until 30 April 2022 and operated through a dedicated NI Direct telephone line from 08:30 – 17:30, Monday to Friday. The Service provided assistance to citizens with checking symptoms of Covid-19, booking a test and receiving advice in regard to self-isolation.

The Digital Self-Trace Platform

507. The PHA's Digital Self Trace online platform was developed to support the Contact Tracing Service to manage the high volume of cases experienced during the pandemic, and further assisted contact tracing staff to focus on more challenging and complex cases. It was launched on 9 October 2020 and enabled NI citizens who had tested positive to provide their details and details of their known contacts online.

Cases and contacts were then sent automated SMS messages with appropriate public health and isolation advice. The Department commissioned a private provider to develop the platform working with the PHA.

508. Digital self-trace was promoted by contact tracing teams and was utilised most effectively during high prevalence peaks, with uptake reaching a maximum of up to 40% of new daily positive cases (based on information provided to the Department from the PHA). Several media campaigns ran during the pandemic to optimise all of the different components of contact tracing in NI, and in particular to increase the public's awareness of the benefits of Digital Self Trace and the STOPCovid NI app.

509. The PHA would be best placed to provide details of the operational performance of the self-trace platform including in relation to system integration, contact tracing software, data sharing and other technical matters with regard to contact tracing technology. From a strategic oversight perspective, the Department understands that pre-pandemic, the PHA used a system called 'HP Zone' for managing contact tracing for small numbers of individuals during limited outbreaks of communicable diseases. The Department's Covid-19 Digital Co-Ordination Cell, along with the PHA, agreed that a new contact tracing platform was required to handle the volume of cases and close contacts anticipated during the pandemic. External support was commissioned to develop and configure new platforms for these purposes. A Contact Tracing platform was developed based on the Microsoft Dynamics technology, and a new Public Health Intelligence platform was developed based on the Microsoft Synapse analytics platform. The integrated approach was an important strength of the delivery of contact tracing services and supported epidemiological investigation and early identification of clusters and outbreaks, as well as monitoring spread of the virus across NI. Extraction of data and the integration that was necessary to connect to other data systems was undertaken as part of the external support arrangements and contracts. Data was shared under defined data sharing agreements and, as far as the Department and I am aware, there were no unexpected issues in this regard. Continued development of the Dynamics platform, for instance to support development and implementation of the Digital Self-Trace Service, was strategically managed under the Department's COVID-19 Digital Co-Ordination Cell and implemented using both HSC and external expert resources. These developments have significantly enhanced the PHA capacity and

capability with respect to surveillance, epidemiologic investigation and data access and sharing and continued to be developed under the PHA "Reshape and Refresh Programme". Further details of progress in the implementation of this programme would be best provided by the PHA. Reflecting on the experience of the pandemic, it is my professional view that it is essential that future data platforms and data sharing agreements are consistent, integrated and aligned across the UK and RoI.

510. Data Privacy Impact Assessments and relevant Privacy Notices produced by the PHA were made available on the PHA website and NI Direct website. The PHA may be best able to assist the Inquiry with any further issues that arose during the course of the relevant period in the performance of contact tracing technologies, and data privacy issues. The PHA would also be best able to provide information in relation to any operational integration of digital and data systems with contact tracing systems in the other UK nations and the RoI, and any processes for data disaggregation and sharing if this would be of further assistance to the Inquiry.

511. Other than for the operation of the Pillar 2 National Testing Programme platform (as described at paragraph 286) and the dissemination of results to the Central Test Registry of NI Covid-19 results, and the appropriate sharing of data through the Tableau and Salesforce platforms (see paragraph 682), the Department is not aware of any other integrated digital and data systems with other UK regions. The PHA may be able to provide additional operational information to assist the Inquiry. Data sharing between the National Testing Programme and NI was shared under appropriate data sharing arrangements provided for in the overarching MoU signed by the Health Minister (see paragraphs 207 to 208). There were occasions when the supply of data from the national testing systems to the NI central test registry were interrupted. Direct communication channels to include notification and resolution of such interruptions were swiftly established and maintained. An overview of data flows and integration with the National Testing Programme systems to the NI Central Test Registry and onwards is summarised at [MMcB7/121 – - INQ000531577]. Data disaggregation and capture was controlled by the National Testing Programme platform and was based on the citizen address stated during testing. Sharing of data with NI was via secure file transfer directly into the NI Central Test Registry environment.

Equalities Issues and Mitigations in the Delivery of Contact Tracing Services

512. The PHA was responsible for operational delivery of the Contact Tracing Service. As such, the Department suggests that the PHA is based placed to assist the Inquiry in relation to any inequalities that were identified with the manner in which contact tracing was delivered and related mitigations, including any lessons learnt. This includes consideration of those who did not or could not use the Proximity app and / or telephony services, and any mitigating measures that were established.

Cost of Providing Contact Tracing Services

513. From the period 1 January 2020 to end of June 2022, the Department allocated funding of £25,997,791 to the PHA for the Covid-19 pandemic response. Of that funding, £5,627,384 was allocated by the Department for the purpose of Contact Tracing in response to two business cases received in the Department from the PHA. In line with business-as-usual financial planning and management, the PHA had full authority to redeploy funding from within its Covid-19 allocations to other Covid-19 response activity, and also had the flexibility to reallocate underspends from other areas of their budget to contact tracing. The Department cannot therefore provide definitive information on the total cost of providing contact tracing in NI. Should the Inquiry require further detail, the PHA may be best able to assist.

Comparison of other UK and RoI Contact Tracing Models

514. An overview of the cross-UK operational differences and similarities in relation to contact tracing, including in relation to functionality and service delivery models, is included within the 4 CMO's Technical Report (Chapter 7 from page 217) [MMcB7/021 – INQ000177534] and as such the detail is not repeated here. England set up a new national system whereas Scotland, Wales and NI adapted existing structures for large-scale contact tracing.

515. The contact tracing delivery model in NI has been described in the detail set out above in this section of the statement, including in relation to workforce and digital solutions. In England, during the early stages of the pandemic, contact tracing was carried out by

Public Health England (PHE) working with local authorities. NHS Test and Trace (NHST&T) was created on 28 May 2020 to lead the government's test, trace and contain approach. NHST&T worked in conjunction with PHE, local authorities, and commercial and academic providers to provide testing and tracing services including supporting people to self-isolate. Contact tracers were employed under contract by SERCO.

516. In Scotland, the overall approach was to use existing organisations and partnerships and to pivot these rather than set up new services. Test and Protect was a Scottish Government-led partnership between NHS health boards, Public Health Scotland and NHS Scotland, and was established in May 2020. Operational delivery was through a local / national partnership model with each local health board recruiting a contact tracing team, and a national contact centre was also set up.

517. In Wales, the contact tracing service used existing public sector structures and was delivered through joint local–regional–national working. The Welsh Government provided national oversight, Public Health Wales provided technical expertise and experience, for example writing an operating framework for regional teams and writing scripts, and health boards and local authorities delivered the contact tracing service using their local intelligence and knowledge.

518. The Department's understanding, consistent with my own, is that, in summary terms, the operational service delivery model for contact tracing in the RoI was broadly similar to that in the UK nations in that it utilised a combination of manual tracing and digital innovations.

Performance of Contact Tracing Services and PHA Reporting

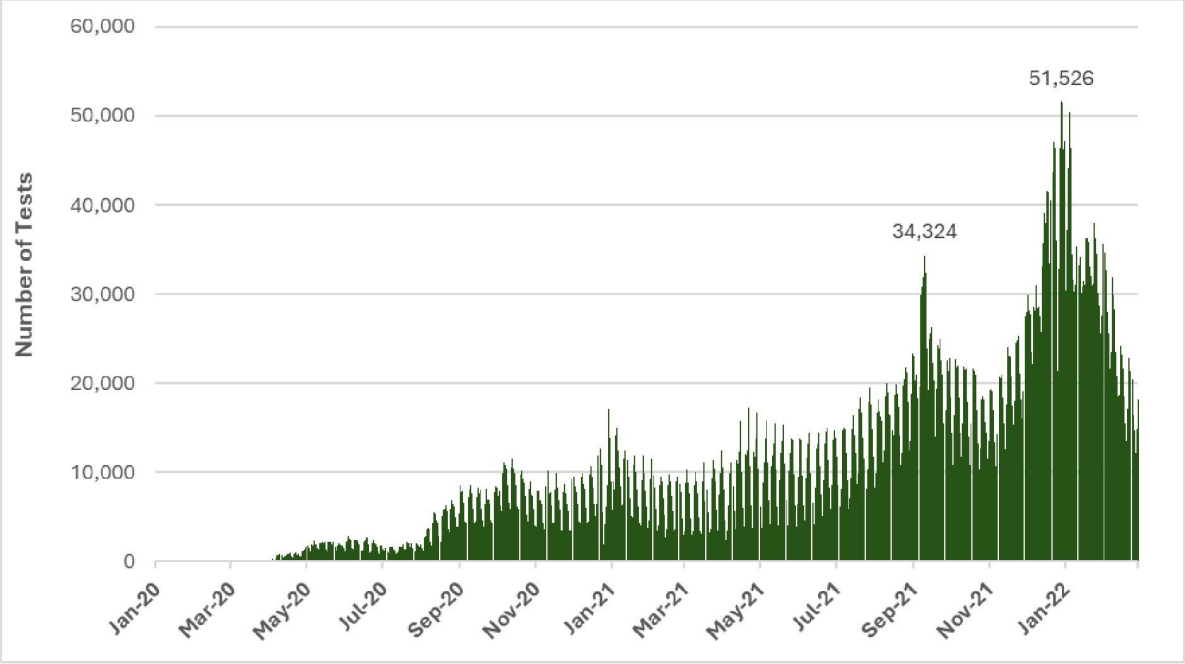
Detail on the Number of Test Results Reported

519. Graph 3 below details the number of LFD and PCR tests reported in the Central Test Register by the date a specimen was provided between the period 1 January 2020 and 28 February 2022. In that period there were 8,251,105 test results reported in total.

From the information available to the Department, it is not possible to provide a breakdown of tests by LFD and PCR test type.

520. To assist the Inquiry further should that be helpful a table of information on tests reported is contained in the worksheet provided [MMcB7/328 – INQ000535717]. Additionally, a pdf version of the Department's Public Facing Covid-19 Dashboard was produced each day [MMcB7/329 – INQ000130401]. These daily updates were available and publicly accessible on the Department's website. The legacy Covid-19 Dashboards remain publicly available on the Department's website [MMcB7/371 – INQ000576818].

Graph 3 - Total Number of Tests (LFD and PCR): 1 January 2020 to 28 February 2022

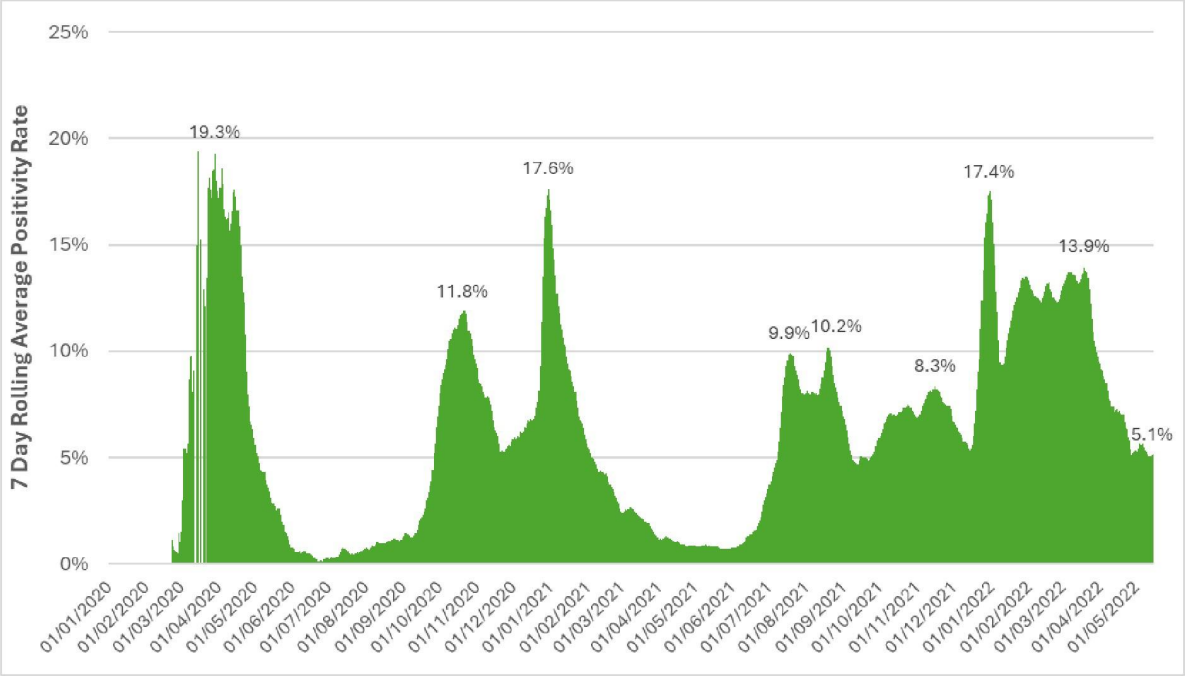


521. Departmental statisticians have advised that the best way to illustrate the percentage of tests which were positive between 1 January 2020 and 28 February 2022 is to calculate a rolling 7-day average positivity rate (Graph 4 below) based on:

(i) the rolling 7-day average of number of cases (new infections / re-infections); and
(ii) the rolling 7-day average number of tests (LFD and PCR) reported, by the date on which a specimen was provided.

522. Information on the rolling 7-day average number of Covid-19 tests and infections (new infections / re-infections) was also made available on a daily basis as part of the Department's Covid-19 Dashboard reporting, and further supporting detail can be found should that be required at the worksheet referenced above at paragraph 520 [MMcB7/328 – INQ000535717].

Graph 4: 7-Day Rolling Average Percentage of Positive Tests (New Infections / Re-Infections) (1January 2020 – 28 February 2022) [2] [3] [4]



523. For the period 1 January 2020 to 28 February 2022, the Department does not hold the following data:

i. Data on the percentage of those tested who did not report their result.

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[2] *It is important to note that the methodology for defining a positive case (new infection / re-infection) resulted in positive tests within 90 days of a previous positive test being excluded.*
[3] *The rolling 7-day averages for tests and infections is a moving average calculated on each date, by taking the numbers reported for that date, the three days after and before, and then dividing by 7.*
[4] *Information is based on COVID tests (PCR and LFT) and positive tests reported in the Central Test Registry.*

ii. Percentage of those who tested positive, who were contacted and within what time frame;
iii. Percentage of those tested who provided contacts to be traced;
iv. Percentage of those contacts who were traced;
v. The time lapse between identification and contacts being contacted by a tracer;
vi. The mean number of contacts traced overall;
vii. Demographic data (age, sex, ethnicity, religion, geographic region, occupation, immigration and socio-economic status) of those who tested positive and provided contacts to be chased and any demographic data of those traced; and
viii. How the percentage of those traced developed between January 2020 and February 2022 and what factors influenced this.

524. As described in more detail in the paragraphs immediately following, management information regarding the activity and performance of the Contact Tracing Service was published by PHA as part of its weekly Management Information Updates. The PHA may be best placed to assist the Inquiry further in relation to more specific data should that be required.

PHA Contact Tracing of Cases and Close Contacts

525. As previously described contact tracing is most effective when positive cases are contacted within 24 hours; and their close contacts within 48 hours of notification to the Contact Tracing Service. As such, these were key metrics used by the Contact Tracing Service to measure and report its performance. Throughout the pandemic the PHA published weekly Management Information Updates on the activity of the Contact Tracing Service, based on its internal data collection and reporting systems [MMcB7/330 – INQ000535718]. The legacy weekly reports can be found on the PHA's website [MMcB7/331 – INQ000535719]. The information was no longer reported by the PHA from June 2022 onwards.

526. The datasets contained in the weekly reports published by the PHA changed at times as the pandemic evolved, and this was explained in supplementary notes to the PHA's weekly reports, but in overall terms reporting included:

i. Total number of positive cases reported to the Contact Tracing Service;
ii. Total number of cases successfully contacted, and the percentage contacted within 24 and 48 hours;
iii. Total number of contacts of positive cases identified;
iv. Total number of contacts successfully contacted, and the percentage contacted within 24 and 48 hours; and
v. Average number of contacts identified by cases that have been successfully reached.

527. The Department does not now hold a final, overall performance summary regarding achievement by the Contact Tracing Service against these operational targets, however performance was reported by the PHA and was discussed regularly with the Department – for example at TTP Oversight Board and ad hoc meetings as necessary [MMcB7/311 – INQ000535713]. Regular updates were also provided to the NI Executive in the form of verbal updates from the Health Minister, the CSA and I at NI Executive meetings, or in papers submitted by the Health Minister to NI Executive [MMcB7/312 – INQ000375892].

528. While there were periods of peak demand during which contact tracing capacity and performance were challenged - examples of which are provided below in paragraphs 530 and 532 - 533 in respect of the significant rise in cases with the return of schools in September 2020 and following the emergence of the Omicron variant - the Department's view is that in general the Contact Tracing Service maintained a relatively good level of performance against these performance metrics. This included periods when it was necessary to employ escalation measures within the Operational Contingency Plan at times of peak demand on services to seek to optimise performance.

529. Further detail in relation to targets for and the effectiveness of contact tracing are included in paragraphs 710 to 717.

530. With the return of schools in September 2020, the Contact Tracing Service had a marked increase in demand for services given rising positive case numbers. The PHA advised the Department at this time that it was actively recruiting and training new

recruits and was also working to consider further options for increasing the staffing capacity across a range of roles – including further recruitment, training, overtime and extended opening hours. Plans were also progressing for the launch of Digital Self Trace. However, in early October 2020, the PHA advised the Department that due to the high number of positive test results in the previous week, the Contact Tracing Service was not able to reach all index cases in a timely manner and that a backlog had developed as a result. The PHA sought advice from the Department on how best to proceed to manage the backlog. In response the Health Minister agreed a proposal that PHA would prioritise a subset of new cases and send a text message targeting all those index cases in the backlog, advising that they use the digital self-trace portal [MMcB7/332 – INQ000535720 and MMcB7/333 – INQ000535721]. The older cases in the backlog received a text acknowledging that they had not been contacted due to the current increased workload. It was acknowledged that cases who had a test through Pillar 2 would have received a notification of their positive result and would have been advised as part of that notification to self-isolate. The key risk was that their contacts would not have been formally identified or received any advice.

531. As set out more fully at paragraphs 439, 541 – 544 below and in paragraph 719, on 3 October 2020 I commissioned a Rapid Review of the contact tracing service and its delivery model. The Review established a number of key findings and learning points which were subsequently taken forward by the PHA reporting progress to the TTP Oversight Board which contributed to important improvements in service.

Challenges Due to the Omicron Variant

532. Whilst the overall picture for the course of the pandemic had improved between April and June 2021, the situation deteriorated significantly between July 2021 and September 2021. Subsequently, for a period of time from late December 2021 until February 2022, case numbers were extremely high, largely in response to the spread of the Omicron variant of Covid-19. As a consequence, the performance of the Contact Tracing Service was significantly challenged during this period. The exponential growth in case numbers was reflected in a deterioration of performance of the contact tracing service against the key metrics reported by the PHA. For example, in the seven-day period up to 2 January 2022, of the 43,243 positive cases reported to

the contact tracing service only 49% were reached within 24 hours and 51% reached within 48 hours. There was a total number of 21,290 positive cases where PHA reported that contact tracing had not been completed. Of these, 20,593 were sent a text message advising to self-isolate in line with guidance and were invited to use the digital self-trace function. Of the total number, 13,994 also received at least one telephone call attempt from the Service. [[MMcB7/334 – INQ000535723]. Further, in the seven-day period up to 6 February 2022 of the 27,660 positive cases reported to the contact tracing service only 59% were reached within 24 hours, and 80% were reached within 48 hours [[MMcB7/335 – INQ000535724].

533. As described at paragraph 468 above, the Contact Tracing Contingency Plan was escalated to Red Status from 18 November 2021. The Health Minister subsequently agreed that the PHA could escalate the Plan to Purple Status from 24 December 2021 [MMcB7/215 – INQ000467025], the highest status in its escalation. From a public health perspective, the escalation was deemed necessary in order to optimise the effectiveness of the contact tracing contribution to helping minimise community spread and to make best use of the Contact Tracing Service resource available given the extremely high levels of transmission. During this period the PHA reported to the Department [MMcB7/336 – INQ000437851] that all the escalation measures in the Contingency Plan had been implemented. Some of the measures in place reported by PHA included a reduced call handling script; not collecting details of household contacts or under 18s; a revised approach to the investigation of potential clusters and travel related outbreaks; the number of calls per positive case was reduced to one per case per day; and a continued promotion of the use and availability of the digital self-trace function. The PHA advised that it was keeping the Contingency Plan under daily review during this period. While the performance against the key contact tracing performance metrics was demonstrably suboptimal in this period, the challenges on the Service were clearly significant and PHA's use of its Contingency Plan and efforts to best manage its available resource were important mitigations. The performance of the Service during this period needs to be considered in the context that contact tracing was likely to be much less effective with such high levels of community transmission and that hospital pressures remained stable.

534. At this stage of the pandemic new treatments for Covid-19 were available for those most at risk of severe disease, and population immunity levels had improved, due to the roll out of the Covid-19 vaccination and immunity from previous infection. As a result, the link between the number of people infected and severe disease and death had been weakened significantly.

PHA Reporting on the Identification of Clusters and Outbreaks

535. Clusters and outbreaks identification and follow up by the PHA was also an important part of the Covid-19 TTP Strategy in NI. On 23 February 2021, the Health Minister approved a proposal for PHA to publish weekly management information relating to clusters and outbreaks [MMcB7/337 – INQ000535725 and MMcB7/338 – INQ000535726]. The information was captured through Enhanced Contact Tracing and public health risk assessments. Clusters and outbreaks related to households were not reported as part of this reporting. The legacy Clusters and Outbreaks weekly reports can be found on the PHA's website [MMcB7/339 – INQ000535728]. The information was no longer reported by the PHA from June 2022 onwards.

536. The published data by PHA analysed outbreaks and clusters by setting, such as: workplace; retail; health and social care setting; funeral/wakes; fast food outlet / takeaway; cinema / theatre / entertainment venue; café / restaurant; sporting event; social event; pharmacy; place of worship; wedding; personal services; bar; hotel; and gyms [MMcB7/340 – INQ000535729]. The analysis by setting helped to inform advice by the CSA and I in relation to restrictions on different settings and activities, and also informed discussions about what impact specific easements in restrictions were having on transmission and incidence of Covid-19.

537. Updates regarding Contact Tracing Service performance and clusters and outbreaks based on the PHA's management information was also discussed at the TTP Oversight Board [MMcB7/311 – INQ000535713] and at weekly Cluster and Outbreak meetings between the Department and the PHA [MMcB7/257 – INQ000447245]. This was important to keep the Department apprised of the ongoing PHA assessment and management of public health outbreaks and incidents, and to inform the Department's ongoing assessment of TTI policy implementation and the effectiveness of public

health advice and guidance and the adherence to relevant extant NPIs. Public reporting of PHA's management information in relation to performance and on clusters and outbreaks was also important for public confidence and for transparency.

538. Information on clusters and outbreaks and contact tracing performance, and as appropriate updates to wider TTI policy, was included in the Department's monthly review of restrictions and regulations papers tabled at NI Executive meetings (see some relevant examples below at paragraph 540). The latest information was also used in briefings by the CSA and I at NI Executive meetings. During periods of low Covid-19 transmission and incidence, a small number of clusters and outbreaks could skew interpretation of other data indicators, so information on clusters was also regularly discussed at the NI Modelling Group and at SIG. The same intelligence on clusters and outbreaks could and did inform discussions on the needs for targeted local actions operationally by the PHA and other agencies including local government and enforcement activity. For example, this included discussion on outbreaks and clusters related to activity in particular settings and sectors and the potential wider implications for increased transmission in local communities and subsequent engagement and actions taken by the PHA.

539. The PHA also published its Weekly Epidemiological Bulletin for NI. This provided a range of testing, contact tracing, surveillance and epidemiological information including in relation to confirmed cases by age, sex, HSC Trust area, Local Government District, care home outbreaks, schools' surveillance, and Primary Care sentinel testing surveillance [MMcB7/341 – INQ000535730]. Again, this information including legacy weekly reporting can be found on the PHA's website [MMcB7/342 – INQ000535731]. The Department suggests that further information on this reporting is best sought from PHA if that would be of assistance to the Inquiry.

540. As refenced at paragraph 538 above, examples of the Department's monthly review of restrictions and regulations papers tabled at NI Executive meetings, including summaries of performance of PHA Contact Tracing Services are:

    i. December 2020 / January 2021: set out that the Contact Tracing Service had experienced a substantial rise in cases over the Christmas and New Year period -

with just under 12,000 cases notified to the system in the 7 days between 28 December 2020 and 3 January 2021, and 21,052 contacts identified in the same period. A further 10,232 cases were notified to the contact tracing system in the 7 days between 4 January 2021 and 10 January 2021 and 14,232 contacts identified. In preparation for this surge, I had recommended and the Health Minister approved a Contingency Plan (as referenced at paragraph 464 above), developed by the PHA to ensure that an effective level of contact tracing was maintained throughout the holiday period and to avoid a backlog in cases. The full implementation of the Contingency Plan, together with a significant focus over the previous months on recruitment and the temporary redeployment of existing staff from the PHA to contact tracing roles, enabled the Service to respond positively to the challenges in that period. In the latter time period set out above - 93% of the 10,232 cases were contacted within 24 hours and of the 14,232 close contacts 94.5% were reached within 24 hours. In summary in the three weeks up to the 10 January nearly 22,000 cases were reported to the contact tracing service and almost 45,000 close contacts identified [MMcB7/343 - INQ000065591].

ii. December 2021/ January 2022: set out that on 3 January 2022 alone there were 11,004 cases received by the Contact Tracing Service (9,537 on 2 January 2022). In the 7 days up to 2 January 2022 there were 43,272 positive cases reported to the CTS (previous 7 days 23,533). In the 4-week period between 29 November and 26 December 2021 78 outbreaks and 479 clusters of Covid-19 were identified. These were mainly associated with workplace settings, retail settings, health and social care settings, Cinema/Theatre/Entertainment settings, and restaurants/cafés; smaller numbers were associated with weddings, hotels, bars, and social settings [MMcB7/344 – **INQ000065604**

Review of Contact Tracing Services

541. As has been referenced above at paragraph 531, and at paragraph 719, on 3 October 2020 I commissioned a Rapid Review of the contact tracing service and its delivery model to reflect on the key issues influencing provision of the contact tracing service and to provide assurances on the capacity of the contact tracing system. Given the

challenges experienced by the contact tracing service in late summer / autumn of 2020 (described above at paragraph 530), I was not fully confident of the capacity and capabilities then in place given what was anticipated would be experienced in further waves of the pandemic. The Rapid Review was underpinned by a key assumption that there would be a significant escalation in Covid-19 infections over the weeks and months ahead (from Autumn 2020) and that in order for the contact tracing service to be effective, positive cases had to be contacted within 24 hours and their close contacts within 48 hours of notification to the contact tracing system.

542. 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 Contact Tracing Services that had worked well, 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 the provision of high quality management information to support oversight of the service.

543. The Rapid Review [MMcB7/253 - INQ000137388] established a number of key findings and learning points which were subsequently taken forward operationally by the PHA and supported by the Department with progress reported to TTP Oversight Board. Delivery of this work was supported through the appointment to the PHA of a Director with responsibility for the Covid-19 Contact Tracing Service in NI. This Director reported to the PHA Chief Executive and also updated the Department through participation as a core member of the TTP Oversight Board. Key findings of the Rapid Review and areas for improvement [MMcB7/345 – **INQ000552988**, MMcB7/346 – **INQ000552990**, MMcB7/347 – INQ000552991, MMcB7/348 – **INQ000553000** and MMcB7/349 – **INQ000442899** included:

i. A requirement for a Programme Board [MMcB7/300 – **INQ000535707** with a specific remit to provide oversight and strategic direction to the operation of the Contact Tracing Service and to ensure integration across the various aspects of the service;

ii. Ongoing workforce challenges in the areas of resourcing, including the recruitment of a wider skill mix to support the professional cadre of staff already recruited and delivering the service;

iii. Support for training, management and quality assurance of the function of call handling;

iv. Requirement for additional administrative systems to support several aspects of the current service and its future development;

v. Expertise and support for data analysis, advanced analytics and development of data platforms;

vi. Refinement of arrangements to support continuous updating to scripts and checklists, and confirmation of systems for assurance of content and utility of these tools; and

vii. Improved communication on recently introduced technology enabled solutions, including the digital self-trace platform, in order to maximise take up from potential users (i.e. cases testing positive).

544. On 3 November 2020 [MMcB7/312 – INQ000375892], the Health Minister wrote to the NI Executive providing an update on the Contact Tracing Service, outlining the planned improvements following the Rapid Review exercise.

Any Other Issues with TTP and Contact Tracing Rollout

545. As previously described, the initial limitation in Covid-19 testing capacity and the inability to rapidly expand the contact tracing service within the PHA were issues that needed to be addressed. The establishment of the Contact Tracing Steering Group and the TTP Oversight Board by the Department, the Department's provision of modelling advice to inform the PHAs service model and the Rapid Review of the Contact Tracing Service were examples of efforts to anticipate and to pre-empt such issues. At an operational level further examples included the development by the PHA of the Contact Tracing Contingency Plan and a range of digital solutions by the PHA working with the Department to support the role out of Test, Trace, Protect.

546. In response to an increase in cases around July 2021, the Health Minister urged anyone who received a positive test result for Covid-19 to use the digital self-trace option for contact tracing. The Health Minister also highlighted concern regarding the use of the term 'pingdemic' which in the Health Minister and the Department's view, and a view that I shared, served only to trivialise the ongoing danger posed by the virus [MMcB7/350 - INQ000576818 025

Isolation Guidance and Support for those Isolating

547. In NI there was not a legal duty to self-isolate for domestic cases and contacts. Rather, rules were classified by the Department of Health (the Department) as "very strong guidance". The exception to this is in relation to International Travel (see paragraphs 327 – 343).

548. In both England and Wales, cases and their contacts had a legal duty to self-isolate and breaching self-isolation could result in fines. This was changed to guidance in spring 2022. In Scotland, like in NI, there was not a legal duty to self-isolate, though isolation after international travel was legally required.

549. The Department maintained close contact with counterparts in the other UK nations and there was close cooperation and appropriate sharing of information to inform policy options across the nations as updates were made throughout the pandemic.

550. The Department does not hold a contemporaneous, composite list of changes to isolation policy across the four UK nations and where/ how this differed. Based on a review of available records, the Department has set out below, against each relevant change, where we understand the change was the same or differed to the other UK nations. The Department does not hold a complete contemporaneous record of the changes to isolation policy in the RoI in the specified period.

Chronology of Changes in Isolation Guidance - January 2020 and February 2022

13 March 2020

551. In line with the decision taken at the COBR (M) meeting on 12 March 2020, from 13 March 2020 individuals developing symptoms (new persistent cough and / or fever) were advised to self-isolate for 7 days. The Department understands this change applied across all UK nations from that date [MMcB7/202 – INQ000531578].

16 March 2020

552. On 16 March 2020, following a decision at COBR (M), members of the immediate household (close contacts) of a case were also advised to self-isolate for 14 days. The Department understands this change applied across all UK nations.

30 July 2020

553. From 30 July 2020, the guidance was updated to extend the self-isolation period from 7 to 10 days for those who had coronavirus symptoms or a positive test result. The Department understands this change applied across all UK nations.

554. This was underpinned by a statement on 30 July 2020 by the UK CMOs [MMcB7/203 – INQ000137383]. The Health Minister wrote to his NI Executive colleagues advising of the change [MMcB7/204 - INQ000381316].

555. Evidence, although still limited at that time, had strengthened, showing that people with Covid-19 who were mildly ill and recovering had a low, but real, possibility of infectiousness between seven and nine days after illness onset.

556. The UK CMOs statement dated 30 July 2020, which I agreed with my CMO colleagues, said: *"… we have considered how best to target interventions to reduce risk to the general population and consider that at this point in the pandemic, with widespread and rapid testing available and considering the relaxation of other measures, it is now the correct balance of risk to extend the self-isolation period from 7 to 10 days for those in the community who have symptoms or a positive test result. This will help provide additional protection to others in the community."*

11 December 2020

557. From 14 December 2020, the guidance was updated to reduce the self-isolation period for close contacts of a confirmed positive case from 14 days to 10 days [MMcB7/205 – **INQ000304966**, MMcB7/206 – **INQ000442434** and MMcB7/207 - **INQ000304966**

558. The change, announced on 11 December 2020, was based on a recommendation by myself and my UK Chief Medical Officer colleagues [MMcB7/208 - INQ000137384]. The announcement confirmed that the change would apply in NI, England and Scotland from that date and that it was already in place in Wales.

559. The decision was based on the available evidence at the time regarding the likelihood of a contact being infectious after 10 days of self-isolation, and also took account of modelling papers from Public Health England and SPI-M, and advice from SAGE.

560. The UK Chief Medical Officers' statement, which I agreed with my CMO colleagues, said: "*...after reviewing the evidence, we are now confident that we can reduce the number of days that contacts self-isolate from 14 days to 10 days. People who return from countries which are not on the travel corridor list should also self-isolate for 10 days instead of 14 days.*"

16 August 2021

561. With effect from 16 August 2021, the guidance was updated so that close contacts who were fully vaccinated no longer needed to automatically self-isolate for 10 days. Instead, they were advised to get a PCR test on day two and day eight of the 10-day period. If they tested positive following a PCR test, they were advised to continue to self-isolate. If they developed symptoms, they were advised to self-isolate and book a PCR test in line with the extant guidance for those with symptoms.

562. The NI Executive agreed the changes [MMcB7/209– **INQ000531581**, MMcB7/210 – **INQ000348896** and MMcB7/211 – INQ000531583].

563. People who were not fully vaccinated still needed to self-isolate for 10 days. The policy change applied to close contacts only.

564. There was no change in relation to those with symptoms or those who tested positive. People who had Covid-19 symptoms, whether vaccinated or not, were advised to immediately book a PCR test and self-isolate until the result. People who received a positive PCR test were advised to keep self-isolating for the 10-day period.

565. Policy in relation to exemption from self-isolation for fully vaccinated close contacts was fast moving across all the UK nations around the time of this change (August 2021). The changes introduced in NI broadly aligned with the policy changes planned or already implemented in other UK Nations around this time, with some specific requirements associated with the change in approach in each country.

17 December 2021

566. With effect from 17 December 2021, the guidance was updated so that close contacts who were fully vaccinated were once again advised to self-isolate immediately for 10 days and book a PCR test. If the PCR test was negative, isolation could stop but the close contact was advised to take a daily lateral flow test every day after the negative PCR result until the 10th day after the last date of contact. The previous advice for fully vaccinated close contacts to take a PCR test on day 2 and 8 was removed [MMcB7/212 – INQ000531584, MMcB7/213 – INQ000531585 and MMcB7/214 - INQ000348902].

567. The update to the guidance was agreed by the Health Minister in response to the emergence of the more transmissible Omicron variant and represented a strengthening of the self-isolation guidance for close contacts of confirmed cases. The changes were introduced with the objective of keeping positive case numbers as low as possible while the accelerated vaccine booster programme was delivered.

568. The Department's records suggest that the approach differed in other UK nations. For example, our records show that the approach in England was that fully vaccinated contacts were to undertake daily lateral flow testing from day one having been identified as a close contact (there was no advice to isolate immediately and no advice to take PCR tests unless a lateral flow test was positive or they developed symptoms). The Department's records show that the approach in Scotland was that all household contacts should isolate for 10 days irrespective of age or vaccination status and that non-household close contacts were asked to isolate initially and take a PCR test - if negative, they could stop isolating. There was no population recommendation for daily lateral flow tests.

5 January 2022

569. With effect from 5 January 2022, the guidance was updated to reduce the required self-isolation period after a positive Covid-19 test. Positive cases could leave isolation on Day 7 providing they had two negative LFD tests at least 24 hours apart, no earlier than Days 6 and 7. This approach was in line with the other UK nations [MMcB7/215 - INQ000467025].

570. Further, fully vaccinated close contacts were no longer required to take a PCR test and could release from isolation following a negative LFD test and provided they continued to return a daily negative LFD test result thereafter until the 10th day after last contact with the positive case. The position with unvaccinated close contacts remained unchanged [MMcB7/216 - INQ000383198].

571. The Health Minister agreed the changes on the 24 December 2021, however the timing of introduction was kept under review, taking account of positive case numbers. The changes were implemented with effect from the 5 January 2022 when many businesses and services returned to normal working after the Christmas and New year holidays. At that time, the rate of community transmission was growing rapidly, with large increases in confirmed cases expected in the coming days and weeks. The Health Minister noted [MMcB7/217 – INQ000531586 and MMcB7/218 – INQ000531587] that the changes were necessary to optimise the public health response and seek to control community transmission and detection of symptomatic disease. In addition, the changes to self-isolation policy would reduce the impact of the self-isolation requirements on both cases and contacts and on the delivery of critical services.

21 January 2022

572. With effect from 21 January 2022 the period of isolation for confirmed cases was reduced from 6 full days to 5 full days, with release on day 6 providing the case had two consecutive negative LFD test results 24 hours apart, with the first taken no earlier than day 5 [MMcB7/219 – INQ000532756, MMcB7/220 - INQ000348904 and

MMcB7/221 - INQ000357327]. The Department understand that the same change took effect in England from 17 January 2022, and was under active consideration in Scotland and Wales at the time of introduction in NI.

573. The timeline of changes above outlines how rules and guidance relating to self-isolation evolved during the pandemic. The evolution of guidance was informed from the start of the pandemic by knowledge of the virus and its behaviour, awareness of particularly vulnerable individuals and populations and the availability of vaccination and epidemiological data. For example, advice on the duration of self-isolation changed with increasing understanding of the duration of the period in which individuals were likely to remain infectious.

574. In general, the trigger for self-isolation to commence was determined as the best estimate of the point at which it was known that an individual was likely to be able to transmit the virus to others, and the end of the self-isolation period was the timepoint at which it was considered that an individual was unlikely to be able to transmit the virus to others. Knowledge about this developed as the pandemic progressed.

575. Knowledge about the virus and its behaviour was largely derived from discussions at SAGE and its subgroups, along with other sources considered by SIG (including international practice), and at UK Senior Clinicians and the 4 UK CMOs group meetings. This informed advice to the Health Minister and the NI Executive by myself and the CSA. Since the scientific evidence relating to the virus and behaviour was shared information across the UK and was discussed both at SAGE and the senior clinicians group, there was in general close alignment in terms of advice and decisions about self-isolation periods between the four nations of the UK. Policy decisions by the NI Executive also took into account other factors, including economic considerations and assessments of impact on society and family life.

576. While there was good information sharing with medical and scientific colleagues in the RoI, decisions about isolation periods in RoI were made separately and we cannot comment on the reasons for any differences which emerged. It is likely that differences in advice between NI and RoI impacted on individual adherence to advice in some instances, depending on the primary sources of advice and information which

individuals were accessing, but we do not have any data which allows us to quantify the impact.

Equalities and Secondary Harms

577. The Department and the PHA were mindful of the potentially disproportionate impact of the pandemic and imposed restrictions, including isolation rules and guidance, across society in general, with a greater impact on certain socioeconomic groups, ethnic minority groups, the elderly, the young, those with a disability and those who required health care. The Department and the PHA commissioned or led a number of reviews, as described immediately below, that considered the impact of the pandemic and the NPIs which were introduced to reduce community transmission, including contact tracing and isolation requirements. In general, it is not possible to disaggregate the impacts of an individual NPI measure such as isolation requirements. However, it is the case that the impacts of the wider NPIs and self-isolation guidance were not felt equally by all and that some were significantly disadvantaged as a consequence. An important learning point for future pandemic preparedness and planning is to ensure that all the scalable capabilities required for an effective response have health inequalities and inequities considerations built in as part of the planning.

578. At the start of the pandemic the Health Intelligence Unit in the PHA developed an evidence overview on inequalities which was shared across the Department and used to inform policy. 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 by isolation and lead to a change in the management of close contacts in schools (see paragraphs 589 – 596 below).

579. In 2020 during the first wave of the pandemic, as described in my evidence to Module M2C of the Inquiry at paragraphs 623 – 624 [see MMcB7/170 - INQ000421704], the Department at my request commissioned the Institute of Public Health Ireland (IPHI) to complete a series of reviews of the potential impact of the pandemic on the indicators in the NI Executive's Public Health Framework, "Making Life Better", the overarching strategic framework for public health in NI. The reports provided evidence drawn from

local, national or international sources on trends in these indicators during the pandemic and research reports on likely impacts on these indicators. Each report provided updates on new evidence or research in any of these areas since the last report was collated. Evidence came from a variety of sources and included government reports, academia, community / voluntary organisations and the WHO. These reviews informed the advice provided to inform the NI Executive reviews of the NPI restrictions as described at paragraph 585.

580. The first two reports were produced in May 2020 [MMcB7/222 - INQ000276461 and MMcB7/223 - INQ00027646] and the third report in July 2020 [MMcB7/224 - INQ00027646]. Further reports were produced throughout 2020 and 2021.

581. Indicators covered include:

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

582. In both June and December 2020, the Department published the Coronavirus Related Health Inequalities Reports [MMcB7/225 - INQ000137375, MMcB7/226 - INQ000137376, and see MMcB7/182 - INQ000183436]. These reports present an analysis of Covid-19 related health inequalities by assessing differences in infection rates, hospital admission rates and deaths between the most and least deprived areas of NI and within Local Government District (LGD) areas for Covid-19 infection and admission rates.

583. The Department and CMOG worked with other departments, the PHA, and the Executive Information Service (EIS) to develop guidance and infographics for the public. The guidance and infographics were translated into several languages spoken within NI, and arrangements were made for those with visual or hearing impairment. Communication campaigns were developed through working closely with a wide range of community sector representative organisations and communities to ensure effective engagement, understanding and communication of relevant guidance on testing and contact tracing and the support available.

584. Advice on the self-isolation period was essentially uniform and applicable to all, apart from bespoke advice to those who were considered to be particularly vulnerable. Due to the pace at which the pandemic evolved it was not possible to carry out equality impact assessments on those individuals or groups with protected characteristics for all legislation and policy enacted. This was also true of the self-isolation guidance and the related changes described above. As described elsewhere in this statement (in the section on "Testing"), advice in different accessible formats for those self-isolating was made available through the NI Direct website, the COVIDCare App and via the COVID Care Helpline.

585. The public health guidance around self-isolation for positive cases and close contacts as described above was different to the Covid-19 Regulations ('Lockdown' regulations), which were in force in NI at different stages and with different iterations throughout the pandemic. The regulations were introduced to put NPIs on a statutory footing and were subject to regular reviews by the NI Executive. Each review considered the public health implications of the NPIs, as is reflected in the relevant review of regulations papers subsequently submitted by the Department to the NI Executive. Any potential emerging equality issues which required amendments to the regulations were reflected in the reviews, which I approved for consideration by the Health Minister and the NI Executive. From the second Review of the Health Protection (Coronavirus, Restrictions) (Northern Ireland) Regulations 2020 [see MMcB7/186 - INQ000346705] and thereafter throughout Wave 1 of the pandemic [see MMcB7/187 - INQ000346706, see MMcB7/188 – INQ000346707, and see MMcB7/189 – INQ000346708] and subsequent waves, the NI Executive papers considered, not only the impact of the pandemic itself, but also the measures put in place to control the

spread of infection including the impact of self-isolation and social isolation more generally as a result of the wider NPIs.

586. The Department highlighted potential adverse impacts of restrictions (including isolation periods) in these papers submitted to the NI Executive. As examples, impacts on mental health and loneliness were considered in the context of advice given on "bubbling" arrangements in the December 2020 period. Wider impacts on mental health and wellbeing, including specific discussion of domestic violence, were highlighted in the third review of the need for restrictions [MMcB7/227 - INQ000448941], and the fifth review of the need for restrictions highlighted issues relating to drug and alcohol misuse [see MMcB7/189 - INQ000346708]. The risk of exacerbating existing inequalities was repeatedly highlighted in these submissions and the Department also provided advice to DfC on the need for mitigations to support self-isolation. The Health Minister also wrote to the NI Executive on 22 November 2021 [MMcB7/228 – INQ000357313] highlighting the importance of financial support and other support mechanisms for those self-isolating and that this was a collective role for all Departments. In the same letter, the Health Minister highlighted again the need for adequate financial support for those isolating and that such support must be accessible for all that needed it, in particular including the most economically vulnerable.

Secondary Harms

587. The Department was generally alert to the disproportionate impact on more vulnerable people and groups, and access to health services which were affected by Covid-19 or the NPI control measures in place and worked to mitigate these, including for those with mental health and addiction problems, those at risk of domestic and sexual abuse and vulnerable children. The focus on this wider range of vulnerable groups reflected the Department's full range of responsibilities. At different stages of the pandemic, steps taken were intended to offer support and protection to these and other vulnerable groups. This included a significant range of support initiatives and I have included some below that I led on directly and others that I was not directly involved in and were led by other policy and professional colleagues within the Department who will be better able to advise:

i. 10 May 2021 the Health Minister confirmed funding of £10m for a Mental Health Support Fund, administered and managed by Community Foundation NI and open to community and voluntary sector organisations offering services for people with mental ill health throughout NI;

ii. on 8 September 2021 the Health Minister confirmed the permanent appointed Professor Siobhan O'Neill as the Mental Health Champion for Northern Ireland, and on 29 October 2021 the Finance Minister announced that an additional £5m had been allocated to the Mental Health Support Fund which had been heavily oversubscribed;

iii. During Wave 3 the Health Minister allocated funding to support Carers in NI. On 19 April 2021 he allocated £4.4m to a carers support fund;

iv. The Protect Life 2 Strategy Steering Group for preventing suicide and self-harm continued to meet throughout the pandemic period. I continued to chair regular meetings of this Group throughout the pandemic response to ensure continued awareness raising of available supports, monitoring of data to signal early emergence of potential issues and to ensure clear information flows with both statutory and community and voluntary colleagues and partner organisations. Calls to the 24/7 Lifeline Helpline, Self-harm Intervention Programme referrals and Sudden Death notifications were closely monitored during this time given our concerns of the potential impact of the pandemic itself and the NPI measures that had been introduced;

v. The Self-Harm Intervention Programme, Lifeline and Bereavement Support Services were widely promoted via social media and professional communication channels. A wide range of mental health, emotional health and wellbeing and stress control training was delivered online. All services delivered under Protect Life 2 continued to be supported including training, awareness raising and public information campaigns, counselling provision, Community Response Plans, and the Flourish churches suicide prevention initiative;

vi. I am aware that the Department participated in fortnightly PSNI-led teleconferences with other government departments and delivery partners in the voluntary and community sector to share statistics and ensure a joined-up approach as part of recovery planning. These teleconferences included the Department, Department of Justice, Department for Communities, PSNI, Women's Aid, Men's Advisory Project, Nexus NI, Domestic and Sexual Abuse Helpline, Northern Ireland Housing Executive, Victim Support Service, Rainbow, NSPCC, Northern Ireland Courts and Tribunal Service;

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

viii. The 'Ask for ANI' pharmacy code word scheme, launched by the UK Government, was also introduced in NI in January 2021 [PM2138 **INQ000276441** This was a new way for victims of domestic abuse who may be isolated at home to access support services. The scheme allowed those at risk or suffering from abuse to discreetly signal that they need help and access to support.

587a. If it is of further assistance to the Inquiry, further detail on these and other initiatives is set out in my evidence to Module 2C of the Inquiry at paragraphs 615 to 636 and again at 642 to 671 [see MMcB7/170 – INQ000421704]. Consideration of secondary harms also needed to be considered along with other factors, including the role of NPIs and self-isolation in protecting those at greater risk and, in particular, in reducing transmission of the virus to avoid excess deaths and the risk of the health system becoming overwhelmed. All these considerations, including wider societal, educational and economic factors, informed NI Executive decision making.

588. While rules and guidance were, in general, applicable to all, the Department recognised that there were different risks of virus exposure for different segments of the population, and the impacts of rules and regulations would be different for different

segments of the population. This was addressed in various ways, though targeted messaging and communication, some sector specific guidance and through specific support. For example, specific letters were issued to those considered to be particularly vulnerable as a result of physical disabilities and/or physical health conditions [MMcB7/229 – INQ000130313, MMcB7/230 - INQ000120706, MMcB7/231 - INQ000130315] There were targeted interventions by the PHA aimed at minority ethnic groups identified as at particular risk and areas where individuals were living in crowded or cramped accommodation, and regular meetings were held with religious and faith leaders including those from minority religious groups and faiths to provide information and hear their concerns. There was targeted advice for individuals considered to be at risk of and / or living with physical or emotional domestic abuse and key workers, which would have included those on zero-hours contracts. Guidance was provided to individuals dependent on external care / carers, and to carers themselves. Much of this detailed work was not carried out by the Department, but by other government departments, arms length bodies and the third sector. Information to assist the Inquiry further in this regard might be best sought from the PHA and DfC.

Approach to the Management of Covid-19 in Schools

589. At a UK level, in August 2020 [MMcB7/232 – INQ000137374] the 4 UK CMOs published a consensus statement summarising the current evidence of the risks and benefits to health from schools and childcare settings reopening. We concluded that, while the reopening of schools would put some upward pressure on community transmission, we were confident that schools were much less important in the transmission of Covid-19 than for influenza or some other respiratory viruses. Initially, close contacts in education settings were managed in the same way as for adults, and contact tracing was conducted within schools. This led to a high number of close contacts being identified from a single case in the early phases of the pandemic and many staff and students experienced significant periods of isolation which impacted on children, parents and carers, particularly those from low-income families.

589. With the later increased community prevalence of Covid-19, combined with large numbers of children still being identified as close contacts of confirmed cases, the 4 UK CMOs group reviewed and provided further advice on the policy for contact tracing

and isolation in schools. This advice, to which I contributed, also took account of the further evidence which emerged on the relatively low attack rate within schools.

590. With the agreement of the Education Minister and the Health Minister the approach to the management of Covid-19 in schools changed, with effect from 10th September 2021, with a view to maintaining a more proportionate balance between reducing transmission in the school setting and the harms caused by children missing school. This updated guidance advised that only those children or teachers who were the very closest contacts – such as those sitting beside the child - should be identified as a close contact and asked to isolate. Subsequent detailed communications issued to all schools set out the new advice. Changes were also made at this time (September 2021) to arrangements for the operational delivery of contact tracing in schools with responsibility transferring to the PHA based Contact Tracing Service to help reduce the administrative burden on teachers and schools [MMcB7/233 – **INQ000305111** – and MMcB7/234 – **INQ000305111**].

591. The revised approach was introduced when evidence became available based on analysis by the PHA and in other jurisdictions of the disproportionate impact that the contact tracing and subsequent isolation was having on children from lower socioeconomic groups. The approach was changed to minimise exclusion when additional evidence suggested it was proportionate to do so [MMcB7/235 – **INQ000137386**

592. The reasons and evidence base supporting the change were included in a letter from me on 9 September 2021 addressed to parents, pupils and the wider school community. Along with the Department's Associate DCMO, I also met with Teaching Unions to explain the rationale and evidence base supporting the changes. The more targeted approach to the identification of close contacts of Covid-19 cases in schools was introduced in order to strike a balance between safeguarding children's education and wellbeing and measures to contain Covid-19. The approach also took account of a range of other factors including the very low risk of severe disease in children and the impacts caused by longer periods of isolation to children's education

593. A number of independent studies, including the University of Oxford review [MMcB7/236 – INQ000497885 and the Public Health Scotland review [MMcB7/237 – INQ000202562, also informed the decisions. Both reports identified that only a small proportion of school close contacts went on to become cases themselves. The PHA also analysed data on over 18,000 students from schools in NI who were asked to isolate because they were close contacts in school and the findings were very similar to those in Scotland.

594. Findings from across the UK were therefore consistent and supported the move to a more targeted approach to the identification of close contacts as the correct and proportionate approach at that stage in the pandemic. The approach taken at the time was in line with the approach taken to schools in England, Scotland and Wales.

595. The Department of Health, the Department of Education, the PHA and the Education Authority engaged regularly throughout the pandemic and to support the development and implementation of the revised approach. Arrangements for the management of confirmed cases in schools were only one aspect of Covid-19 mitigations in schools at the time. Other measures in place at that time, which contributed to keeping schools a safe place for children, included additional cleaning and hand hygiene, ventilation, the use of face coverings, and regular asymptomatic testing. All school staff also had the opportunity to be fully vaccinated.

596. On 30 September 2021, the Health Minister wrote to advise his NI Executive colleagues of the decision to extend the more targeted approach to Contact Tracing in schools to certain out of school settings, so as to align these with in-school contact tracing. This change brought arrangements in registered school-age group childcare settings, sports clubs and similar settings into line with those introduced in schools [MMcB7/238 - INQ000444603 and MMcB7/239 – INQ000348896].

Adherence

Adherence with Self-Isolation Guidance and Penalties

597. In the initial phase of the response, it was viewed that the people of NI would accept and adhere to the restrictions on their freedoms, including TTI guidance, if it seemed likely that these would be for a few weeks and were short term, given their primary focus on saving lives, preventing severe illness, and preventing the health service being overwhelmed. It was also recognised that for a small minority, restrictions of any nature were likely to be unacceptable, irrespective of the rationale. As I set out in my evidence to Module 2C of the Inquiry regarding adherence and behavioural factors more widely (at paragraph 753 of my 2nd CMO statement [see MMcB7/170 – INQ000421704]), in my view during the pandemic enforcement was a last resort and only when there was not voluntary adherence in the public good. During the pandemic I was fully supportive of the PSNI approach to the regulations through the '4 Es' approach which involved PSNI officers engaging with members of the public, explaining the Coronavirus Laws and Regulations, encouraging them to comply and enforcing the rules only as a last resort by issuing fines.

598. As previously indicated, in NI there was not a legal duty to self-isolate for domestic cases and contacts. Requirements and rules were classified by the Department as "very strong guidance". As such, the Department did not play a role in enforcing or ensuring adherence with isolation requirements. However, it did continuously promote, throughout the pandemic, the importance of adherence with isolation requirements - both through its own ongoing communication and as part of an integrated cross-Departmental communications approach, including under the auspices of the NI Executive's Covid-19 Taskforce which formed in February 2021 [see MMcB7/034 – INQ000348965], and through communications with the PHA. As I set out in my evidence to Module 2C of the Inquiry (paragraphs 394 – 395 [MMcB7/240 – INQ000276513 and MMcB7/241 – INQ000276514]) the Health Minister, CSA and I continued to reinforce the public messages on adherence to the public health advice including the advice on testing and self-isolation. This included a statement from the Health Minister on 6 August 2020 warning that the latest total for new Covid-19 cases provided a "wake-up call for the complacent" and a joint

statement on 9 August 2020 from CSA and I warning against carelessness and fatigue and highlighting concerns about the increase in confirmed Covid-19 cases and the R number. We also expressed concern about the consequences of a sharp peak in cases in the autumn and winter and we asked for continued vigilance and adherence to the public health advice, recognising the sacrifices already made by many to protect those more vulnerable to the effects of the virus and themselves.

599. As previously described in my evidence to M2C of the Inquiry at paragraph 750 [see MMcB7/170 – INQ000421704], during the pandemic there were several sources of evidence on public adherence to NPIs including survey results and analysis of open-source mobility data via Google. On 20 April 2020, the NI Statistical and Research Agency (NISRA) launched a new Coronavirus (Covid-19) Opinion Survey to measure how the Covid-19 pandemic was impacting on people's lives and behaviour in NI. Approximately 22,000 people participated in the survey, providing data on a wide range of relevant topics. The reports focused on issues such as Hygiene Behaviours, Social Distancing, Face Coverings and Slowing the Spread of Coronavirus (Covid-19). The Department commissioned Queen's University Belfast (QUB) to conduct a contact matrix survey and TEO also commissioned Ipsos Mori to conduct surveys. Adherence was reasonably good on the part of most of the public but varied across different socioeconomic groups and with certain other demographic including age.

600. Survey data from a variety of studies including those at paragraph 599 suggested that there was variability in terms of segments of the population who were less likely to adhere to mitigations, including the recommended self-isolation period. In particular, younger individuals were less likely to adhere than older people, men were less likely to adhere than women, and those from a more deprived background were less likely to adhere than the more affluent. This information informed messaging and communications strategies, and was utilised when promoting targeted messaging, and financial support via DfC.

601. The Department does not hold information on the number who were testing and completing their full self-isolation period in line with guidance. The PHA may be able to provide further information although apart from the survey information and research described above, I am unaware of an objective measure of this.

Adherence and Enforcement of Covid-19 Regulations

602. The Covid-19 Regulations were subject to separate enforcement and compliance considerations and contained criminal sanctions. As provided in my evidence to M2C of the Inquiry at paragraphs 754 – 756 [see MMcB7/170 – INQ000421704] adherence to, and enforcement of, Regulations was not straightforward, and responsibility lay outside the Department. While the survey evidence and impact of the regulations indicated that most people were following the advice and restrictions, the need for a consideration of enforcement of the Covid-19 Regulations and the levels of fines as a deterrent was discussed at a meeting of the NI Executive. While concerns were discussed, as I recall no department believed it had 'ownership' of enforcement of the Regulations. This issue was also raised by the CSA on 1 July 2021, when he advised that poor enforcement and adherence to the existing regulations and restrictions were a cause for concern [MMcB7/242 – INQ000048536].

603. On 10 September 2020 at a meeting of the NI Executive, it was then noted that "*a working group on compliance and enforcement of the regulations [will] be established*" [MMcB7/243 – INQ000048488]. This group was led by the Junior Ministers within TEO; however, while beneficial regarding engagement and encouragement, and the CSA and I supported these meetings and the associated sectoral engagement providing professional scientific and medical advice, I have no objective evidence of the effectiveness of this group or of the engagement. The Health Minister continued to raise with FM and dFM his concerns with respect to the enforcement of regulations [MMcB7/244 – **INQ000303894** and MMcB7/245 – INQ000425652]. There was consideration given by the NI Executive to local councils deploying Covid-19 Marshals to support engagement and encourage adherence to the Regulations and to support the PSNI. In addition, local councils and respective CEOs and their teams played a significant role in local community engagement and encouraging adherence. I had direct contact with an Assistant Chief Constable in the PSNI in relation to enforcement and other relevant issues and occasionally these meetings also included the CSA. I believe this engagement was positive, helpful, and constructive.

604. In light of the challenges with enforcement of the Covid-19 Regulations, the CSA and I provided advice to the NI Executive on the importance of adherence and enforcement

[MMcB7/246 – INQ000353616 and MMcB7/247 - INQ000353617] as well as sharing relevant SAGE papers. The Health Minister raised issues with FM and dFM [MMcB7/248 – INQ000425653 and MMcB7/249 – INQ000425654] and the CSA and I also wrote to the Chair of the TEO Adherence Group (a subgroup of the Executive Covid Taskforce) and stressed the need for a consistent approach to engagement and enforcement on the ground as we believed the most economically vulnerable may be less likely to seek testing, engage with Test Trace Protect Service or self-isolate, or to take time off work to get vaccinated if this threatened their financial stability. We suggested that the Adherence Group should investigate whether this was the case in their survey work and, if so, investigate the reasons why and take actions to improve this situation, including ensuring that individuals are practically and financially supported to safely isolate, and permitted time away from work to get vaccinated [MMcB7/250 – INQ000353619].

605. As described previously at paragraphs 82 and 83 and at paragraph 330, the Department, with the agreement of the NI Executive, introduced the International Travel Regulations. The Department had no direct role in the enforcement of these regulations, as this was the responsibility of other agencies. For example, as UK border policy and operations are UK Government reserved matters, a fixed penalty notice regime introduced under the Travel regulations was operated by Border Force and enabled its officials to issue fixed penalty notices to those arrivals who did not comply with the requirements in relation to testing packages. Further, PSNI officers were given powers under the regulations to issue fixed penalty notices to those contravening the regulations and were also given powers to direct a person who did not comply with the self-isolation requirements to return to the place of isolation or to remove them to the place of isolation.

Support to those Isolating

606. As described in the "Test, Trace and Protect" section of this statement, DfC had a lead role in providing the support that was needed for those who were self-isolating. This included the provision of financial support through DfC's Discretionary Support Scheme. The Department worked closely with DfC colleagues under the auspices of the TTP Oversight Board. The PHA provided in person public health advice and

support through its contact tracing service and will be best placed to provide detail of the operational advice and support provided by its contact tracing service. At times those self-isolating were doing so in difficult personal circumstances, for instance when they had an underlying health condition or when another family member may have been ill in hospital. In such circumstances, the personalised and professional nature of the support was important.

607. The Department also worked with DfC from early May 2020 until 31 July 2020 to put arrangements in place for priority access to online grocery shopping slots for those who were Clinically Extremely Vulnerable and isolating. This included food box deliveries to those who were unable to access food through online shopping, family, friends or local support networks. DfC also worked with major food retailers to provide priority access on their websites to those shielding. The Department worked with DfC to provide confirmation whether a person requesting the services was on a list of individuals who had been authenticated as benefiting from shielding, with appropriate information governance in place.

608. The Health Minister also wrote to the then Communities Minister highlighting the continuing importance of financial support to those isolating and seeking an update of the financial support measures in place and consideration of enhancements that may be required to support self-isolation particularly those on low income [MMcB7/251 – INQ000346709]. The Communities Minister's reply set out the range of supports actively being delivered by her department (including the Discretionary Payment Scheme for those isolating and how DfC was working with PHA to support individuals in the event of a Covid-19 cluster outbreak), and further supports under consideration by her department [MMcB7/252 – INQ000453240].

609. Advice to those self-isolating and information regarding sources of support was available on NI Direct and via the COVID CareNI App and the COVID CareNI Helpline. As I previously outlined in evidence to Module M3 of the Inquiry at paragraph 435 [see MMcB7/191 – INQ000421784], the Department recognised that many people saw a deterioration in their mental health during the pandemic and that this was exacerbated by the NPIs, including the guidance for self-isolation and repeated periods of self-isolation. A range of initiatives from the Department's mental health cell were put in

place to mitigate these effects, including public information campaigns highlighting, for example, the advice available on the Mind Your Head website. NI Direct also directed people to sources for advice and support. Information was, in addition, available via the 'Covid-19 NI' mobile app, with an on-line version of the app also available. A Northern Ireland Covid-19 Community Helpline, managed by the third sector organisation Advice NI, was available 7 days a week to support anyone who was feeling isolated. The helpline provided support with issues such as access to food and other essentials such as medicines, and in the first wave arrangements were put in place to arrange the collection and delivery of medication to those who were isolating or shielding. The Community Helpline connected people to a range of practical and emotional support services, including local volunteer supported shopping and local or community food support organisations. A Covid-19 Virtual Wellbeing Hub was launched in mid-June 2020 providing access to self-help guides and tailored information from local mental health and well-being charities. These resources were designed to help maintain and promote positive mental health and well-being both during and after the Covid-19 pandemic.

610. Should the Inquiry require any further information regarding support for those isolating, including with regard to any inequalities and mitigations, the Department suggest this is best sought from DfC.

Chronology and Legislation: Test, Trace and Isolate (TTI) Decision-Making and Policies

611. The Department was responsible in the main for setting all strategic policy in relation to the TTI including the TTP Programme and the Department kept the NI Executive updated in relation to key changes where relevant. All decisions taken by the Department on TTI policy matters were appropriately informed by the available data, modelling and other relevant information from a wide range of sources at the time of the decision.

Decisions by the Department of Health taken with the NI Executive

612. As described previously, including at paragraphs 82 to 83 and more fully at paragraph 330, policy decisions in relation to testing and isolation to support International Travel and Travel Within the Common Travel Area were referred by the Department to the NI Executive for consideration, agreement and approval.

613. With the exception of changes in relation to travel policy as noted, TTI policy decisions were usually taken by the Department, and the NI Executive was asked to note changes which were being made as appropriate.

614. There were, however, a small number of instances where the Department requested that the NI Executive agree to proposed changes to the TTI policy. In such instances, the Department typically provided its advice and recommended the changes to the NI Executive and, in general, these recommendations were accepted by the NI Executive. From a review of available records, the reasons for requesting the NI Executive's agreement in these small number of instances is not documented in the relevant papers. However, in an effort to assist the Inquiry in understanding the rationale to such referrals, it is my view that it was most likely because of political considerations, the profile of the issue, and/or potential for differences in the views of Ministers with respect to policy approach and the balance of personal freedoms.

615. A review of available records has identified that the following matters relevant to the TTI policy were referred to the NI Executive for agreement:

i. **August 2021:** Changes to self-isolation for fully vaccinated close contacts of Covid-19 cases was agreed by the NI Executive [see MMcB7/209 - INQ000531581]. A paper from the Health Minister dated 11 August 2021 was tabled for discussion at the NI Executive meeting on 12 August 2021. The paper set out the Health Minister's advice to inform consideration of proposed changes to the management of self-isolation of close contacts of Covid-19 cases who had been fully vaccinated with an MHRA-approved vaccine. The paper outlined the factors influencing the proposed changes in policy and the advice was supported by myself and the CSA. The NI Executive was asked to agree the implementation of a revised approach to self-isolation for close contacts, whereby close contacts would no longer need to self-isolate subject to certain conditions and mitigations being met. This change in policy was to take effect from 16 August 2021. The Department, with the PHA, led on the implementation of the agreed changes. This policy change is described more fully in the section on "Isolation".

ii. **November 2021:** The Health Minister issued a paper to the NI Executive dated the 22 November 2021 in relation to additional measures to accompany the introduction of Covid-19 status certification in a domestic setting [see MMcB7/228 - INQ000357313]. Amongst other matters, the paper signalled the Health Minister's intention to consider TTI changes to the approach to the testing regime recommended for individuals (vaccinated and unvaccinated) who were close contacts of confirmed cases of Covid-19. The paper also recommended measures in respect of promoting LFD testing prior to attending a social gathering and increasing the uptake of testing in schools. The NI Executive was asked to consider the proposed changes and agreed that the additional measures as outlined in the paper were taken forward.

iii. **November/December 2021:** The Health Minister issued a paper to the NI Executive dated 27 November 2021 setting out recommended changes to the testing of close contacts of confirmed Covid-19 cases [MMcB7/265 - INQ000381317 The paper was tabled for discussion at the NI Executive meeting on the 2 December 2021. The NI Executive was asked to consider and support the changes outlined in the paper to testing arrangements for close contacts of confirmed Covid-19 cases which included:

the requirement for fully vaccinated individuals to take a daily LFD test starting as soon as possible following their identification as a close contact until 10 days post exposure, in addition to PCR testing requirements; unvaccinated or incompletely vaccinated adults to take a second PCR test on day 8 and to complete a full 10 day period of self-isolation even if the PCR result was negative; and post primary school aged children and young people to be asked to book a second PCR test 8 days after exposure, with the recommendation that they take a daily LFD from the day after their initial negative PCR test until 10 days after the exposure. The proposed changes were agreed by the NI Executive on the 2 December 2021. The Department, with the PHA, led on the implementation of the agreed changes.

Key TTI Policy Decisions taken by the Department of Health

616. This section sets out a chronology of key decisions taken by the Department in relation to TTI policy in the Module 7 period. The Inquiry is asked to note that the chronology detailed below does not replicate those chronologies which set out key decisions taken by the Department in relation to TTI policy changes (in the case of travel, as agreed with the NI Executive) and are detailed elsewhere in other sections of this statement. This includes the following:

i. Rules and guidance on self-isolation of Covid-19 positive cases and close contacts; this information is set out at paragraphs 551 to 572;

ii. Testing and isolation to support International Travel and Travel within the Common Travel Area; information is set out at paragraphs 328 and 335 to 343;

iii. Care homes; information is set out at paragraphs 308 to 314;

iv. Schools, including schools for children with special educational needs is set out at paragraphs 315 to 326;

v. Healthcare workers: information is set out at paragraphs 299 to 307; and

vi. Expansion of LFD testing across a range of different sectors and delivered under the NI Smart Programme is set out at paragraphs 155 – 162 and 276 - 282.

617. The chronology of key TTI policy decisions, as set out below, includes details of the Interim Protocol on Testing (IPT) which was an operational tool providing information on the eligibility for testing and advice on how to access testing (further detail regarding IPTs is set out in the "Testing section" of the statement). The Health Minister was aware of the use of the IPT and its purpose, and that it was kept under review and updated regularly, but did not approve the IPTs for issue. Any key TTI policy changes and decisions that were reflected in the IPT were approved by the Health Minister via submissions in the usual manner.

i. **March 2020:** Version 1 of the IPT dated 19 March 2020 [see MMcB7/055 - INQ000120705] was developed by the Department with input from relevant professional colleagues. I approved Version 1 on 20 March 2020 and it was disseminated widely to the HSC for implementation and was operational from that date. The order for priority of testing during periods of significant demand was broken down into 4 Groups:

- **Group 1 (test first)** - patients requiring critical care for the management of pneumonia, Acute Respiratory Distress Syndrome (ARDS) or influenza like illness (ILI), or an alternative indication of severe illness has been provided, for example severe pneumonia or ARDS.

- **Group 2** - all other patients requiring admission to hospital for management of pneumonia, ARDS or ILI.

- **Group 3** - Health Care Workers (HCWs) working in the following settings:

  a. Physicians and surgeons involved in the care of acutely ill patients;
  b. Emergency Departments;
  c. Critical Care Units/Intensive Care Units;
  d. Primary Care;
  e. Frontline Ambulance staff; and

f. This also included cases where family members were causing the HCWs to self-isolate and symptomatic HCWs who were self-isolating.

- **Group 4** - clusters of disease in residential or care settings, for example long term care facilities and prisons.

ii. **March 2020:** Version 2 of the IPT dated 26 March 2020 [see MMcB7/140 - INQ000362314] was developed by the Department and was informed by recommendations and amendments proposed by the Department's EAG-T and input provided by other relevant professionals. I approved Version 2, and it was disseminated to the HSC for implementation and was operational from 28 March 2020. The main changes in Version 2 included the extension of testing to nurses and AHP's involved in the care of acutely ill patients and frontline care staff in the Community, to include HSC Trust and non-HSC Trust employed staff. Version 2 also provided clarification about which staff within Primary Care could access testing and explained that testing for other HCWs or critical staff not listed could be considered on a case-by-case basis at the discretion of the Medical Director of each HSC Trust.

iii. **April 2020:** The Department developed its first Covid-19 Testing Strategy which was approved by the Health Minister and presented to the NI Executive on 6 April 2020 [MMcB7/266 - INQ000103649]. The Strategy, which drew on local expertise from HSC Trusts, the Pathology Network and Universities, as well as a desktop review of the testing strategies developed elsewhere, aimed to reduce harm to individuals from Covid-19 and to support measures needed to protect the general population. The Strategy advised on short term, medium term and long-term testing approaches and set out a number of key actions including, but not limited to: increasing laboratory capacity; surveillance initiatives; point of care testing to control outbreaks; participation in research programmes, and genomic programmes. The PHA led on the implementation of the testing programme overall, working with a range of other key delivery partners.

iv. **April 2020:** Version 3 of the IPT dated 19 April 2020 [see MMcB7/143 - INQ000103724] was developed by the Department and was informed by recommendations and amendments proposed by the Department's EAG-T and input provided by other relevant professionals. I approved Version 3, and it was disseminated to the HSC for implementation and was operational from 19 April 2020. The main changes set out in Version 3 included two new priority groups for testing - symptomatic residents in care homes and cancer patients.

v. **May 2020:** Version 4 of the IPT dated 4 May 2020 [MMcB7/267 - INQ000469808] was developed by the Department and was informed by recommendations and amendments proposed by the Department's EAG-T and input provided by other relevant professionals. I approved Version 4, and it was disseminated to the HSC for implementation and was operational from 4 May 2020. The main changes set out in Version 4 included that all health and care workers were now eligible for testing. Additional changes also included: the further expansion of testing in care homes; testing of all elective and non-elective patients (including asymptomatic patients) admitted overnight into hospital; the availability of testing to all key workers and to members of their household if they had symptoms that caused a key worker to self-isolate; and testing for all new overnight admissions to paediatrics, learning disability and mental health in-patient wards within 24 hours of admission.

vi. **May 2020:** The Department's updated Covid-19 Testing Strategy was presented to the NI Executive to inform them of changes on 21 May 2020 [MMcB7/268 - INQ000381321 and MMcB7/057 - INQ000103650]. The updated Strategy set out how testing capacity had been expanded and was being used on a prioritised basis. A key change was the inclusion of testing for essential or key workers in sectors in addition to the HSC. The updated Strategy focused on enabling rapid identification of cases and contacts, supported by testing and isolation. The PHA led on the implementation of the testing programme overall, working with a range of other key delivery partners.

vii. **May 2020:** Version 5 of the IPT dated 23 May 2020 [see MMcB7/174 - INQ000416776] was developed by the Department and was informed by

recommendations and amendments proposed by the Department's EAG-T, and input provided by other relevant professionals. I approved Version 5, and it was disseminated to the HSC for implementation and was operational from 25 May 2020. The main changes in Version 5 included: a new case definition for Covid-19; an update on how to manage results; and the further expansion of groups eligible for testing which included Supported Living facilities, maternity services, admissions to prisons, and symptomatic members of the public.

viii. **May 2020:** The Department developed the "Covid-19 Test, Trace, Protect Strategy" which was approved by the Health Minister on 18 May 2020 and published on 27 May 2020 [see MMcB7/035 - INQ000120704]. The Strategy was designed to break the chain of transmission of the virus by identifying people with Covid-19; trace people who may have become infected by being in close contact with them and support those people to self-isolate so that, if they had the disease, they were less likely to transmit it to others. The Strategy also set out the establishment and high-level forward work programme for the Contact Tracing Service led by the PHA.

ix. **July 2020:** Version 6 of the IPT dated 9 July 2020 [MMcB7/269 - **INQ000535688** was developed by the Department and was informed by recommendations and amendments proposed by the Department's EAG-T and input provided by other relevant professionals. I approved Version 6, and it was disseminated to the HSC for implementation and was operational from 10 July 2020. The main changes in Version 6 included: advice on the regular testing of staff working in specialities with vulnerable patients when there was evidence of nosocomial infection; clarification about the requirement to retest learning disability and mental health patients after a weekend discharge; and an expansion of the groups eligible for testing to include planned day case admissions, individuals with symptoms attending Emergency Departments who did not need to be admitted, international key workers, and symptomatic children under the age of 5.

x. **July 2020:** Version 6.1 of the IPT dated 23 July 2020 [see MMcB7/124 - INQ000469795] was developed by the Department and was informed by

recommendations and amendments proposed by the Department's EAG-T and input provided by other relevant professionals. I approved Version 6.1, and it was disseminated to the HSC for implementation and was operational from 24 July 2020. Version 6.1 included updated advice on staff exposures.

xi. **October 2020:** Version 7 of the IPT dated 12 October 2020 [MMcB7/270 - INQ000530994] was developed by the Department and was informed by recommendations and amendments proposed by the Department's EAG-T and input provided by other relevant professionals. I approved Version 7, and it was disseminated to the HSC for implementation and was operational from 15 October 2020. The main changes in Version 7 included: information on the SIREN study advice; encouraging testing for virological clearance in severely immunosuppressed patients; whole genome sequencing testing; information on the regular programme of testing in care homes and testing when there was a confirmed or suspected Covid-19 outbreak; updates to the testing of cancer patients and day case admissions; and an expansion of the groups eligible for testing to include RQIA Inspectors, long stay hospital patients (where long stay was over 3 months) to include staff testing, and admissions to hospices.

xii. **July 2021:** Version 8 of the IPT dated 20 July 2021 [MMcB7/271 - INQ000535689] was developed by the Department and was informed by recommendations and amendments proposed by the Department's EAG-T and input provided by other relevant professionals. I approved Version 8, and it was disseminated to the HSC for implementation and was operational from 20 July 2021. The main changes in Version 8 included: updates on testing for acute admissions to hospital (elective and non-elective), planned day case and inpatient admissions, maternity services, Emergency Departments, and Supported Living facilities; advice on the exemption from regular testing within 90 days of a positive PCR test unless someone developed new symptoms of Covid-19; testing of contacts of positive cases; information on the regular programme of asymptomatic testing for HCWs; and an expansion of the groups eligible for testing to include asymptomatic visitors to care homes and hospices.

xiii. **October 2021:** Version 9 of the IPT dated 6 October 2021 [MMcB7/272 - INQ000377265] was developed by the Department and was informed by recommendations and amendments proposed by the Department's EAG-T and input provided by other relevant professionals. I approved Version 9, and it was disseminated to the HSC for implementation and was operational from 6 October 2021. The main changes in Version 9 included: updates on testing for acute admissions to hospital (elective and non-elective), hospital admissions for learning disability and mental health, planned day case and inpatient admissions, maternity services, Emergency Departments, care homes, and asymptomatic HCWs; testing for individuals undergoing cancer surgery to minimise the risk of cancellation; advice on testing when there was a late cancellation of an elective care slot; advice on patients hospitalised due to Covid-19; and an expansion of the groups eligible for testing to include chemotherapy patients and their families, asymptomatic visitors to hospitals, asymptomatic domiciliary care staff and asymptomatic personal assistants.

xiv. **March 2022:** The Covid-19 Test, Trace and Protect Transition Plan developed by the Department was published on 24 March 2022 [see MMcB7/059 - INQ000348966]. The Transition Plan set out a more targeted approach, focusing test and trace activity to protect and support the most vulnerable and those at highest risk of serious illness should they contract Covid-19. Implementation of the Transition Plan was led by the PHA and the HSC Trusts in relation to in-hospital testing.

xv. **May 2022:** Updated guidance on Covid testing to support clinical pathways in hospital settings [MMcB7/273 - INQ000535693] was developed by the Department and was informed by recommendations and amendments proposed by the Department's EAG-T and input provided by other relevant professionals. This guidance replaced the advice set out in Version 9 of the IPT which was withdrawn from use. I approved this guidance, and it was disseminated to the HSC for implementation and was operational from 13 May 2022. The main changes set out in the updated guidance included revisions to the testing requirements for: patients with planned admissions; asymptomatic inpatients; chemotherapy patients and their households; patients with cancer

being admitted for planned surgery; and parents of acute paediatric haematology patients. The updated guidance also set out changes to the type of testing technology to be used for patients who did not have Covid-19 symptoms and who tested negative on admission to hospital, and for patients without Covid-19 symptoms who required emergency admission to a learning disability or mental health inpatient unit, and patients returning from a period of planned leave to these settings.

Public Communication

618. Throughout the pandemic response there was regular engagement between the Department and respective communication teams in government departments in the other jurisdictions and public health bodies across the UK, including the PHA, to coordinate and develop public communications and core public health messages and guidance with respect to the importance of NPIs, including testing, contact tracing and self-isolation. While I was not directly involved, the Department also participated in regular UK-wide communications discussions, led by the Cabinet Office, with regard to the overall pandemic response – which included messaging regarding the importance of testing, contact tracing and isolation. The data and analysis informing these discussions was available to the Executive Information Office (EIS) and the Department, and was also shared with the CSA and myself. This was essential to ensure informed, clear, consistent public health messaging and public understanding of the importance of TTI along with the other NPIs in breaking chains of infection and reducing community transmission.

619. As CMO, I worked closely with the three other UK CMOs to agree joint professional advice to the UK Government policy and communications on testing, isolation periods and on quarantine with respect to borders. The CSA and I also provided professional public health and scientific technical advice to the Health Minister to inform TTI policy in NI, including on the use of tests and new testing technology such as LFDs for asymptomatic testing, the duration of the isolation period for people testing positive for Covid-19 and the isolation period of close contacts as this evolved with each wave of the pandemic, with the emergence of new variants, and as higher levels of population immunity were achieved with the roll out of vaccination and the weakening of the link between infection and severe disease. The CSA, DCMOs, and I met regularly with CMO/ DCMO counterparts in the DAs and the RoI to exchange intelligence and also discussed public health advice and scientific advice to inform public communication strategies with respect to NPIs, including TTI, drawing on the information available from behavioural science and both UK wide and NI survey data.

620. The response of the public and their collective efforts and adherence to the advice on TTI was generally good, with regular testing, contact tracing, repeated periods of self-

isolation and asymptomatic testing becoming a part of everyday life for most people. This was particularly the case given the significant impact of the NPIs and guidance on lives and livelihoods. I believe that, in part, this reflected the effectiveness of the approach to communications and how these adapted and evolved based on evidence of effectiveness and the response of the public. Undoubtedly, many more lives would have been lost had the public not cooperated to the extent that they did. In the Department's view, key to this cooperation was public understanding that we were open and transparent in relation to what was known and what was not, including the effectiveness of NPIs and TTI implementation, as well as providing an understanding of the rationale for what was being asked for and being candid about the degree of uncertainty. In my view this contributed to building and maintaining public confidence and trust in those who provided the messages and in what was communicated. This level of public trust will be as essential in any future pandemic.

Role of the Executive Information Service (EIS)

621. TEO and the EIS (based within TEO) was responsible for the NI Executive's Covid-19 public information campaigns throughout the pandemic and coordinated communications and messaging with respect to NPIs, including the importance of test, trace and self-isolation if a person tested positive. The Department's Press Officers are part of the EIS, with the exception of the Department's Director of Communications who reports to the Department of Health Permanent Secretary. The Department contributed to the shaping of the NI Executive's Covid-19 public information campaigns on a number of aspects including professional advice from the CSA and myself and regular input from the Department's communications professionals. There was close co-operation in general between the Department and EIS/TEO throughout the pandemic on public messaging. For example, different facets of the public information and advertising campaigns were signed-off by the CSA and myself from a technical public health and scientific perspective.

622. More operational aspects of public health communication on TTI implementation were led by the PHA, in liaison with the Department, as set at paragraphs 644 and 654 to 657 below. Campaigns including communication on TTI were reviewed and adapted over the course of the pandemic and the messaging modified according to the

anticipated trajectory of the pandemic, the changing level of risk, and monitoring of the effectiveness of the approach. The monitoring of message effectiveness across these campaigns was primarily through survey data on adherence as described at paragraph 638 below and at paragraphs 599 to 600. This was also informed by ongoing engagements and communications by the Department with the PHA and partner bodies across different fora, and by public health intelligence from the PHA, including information on infection clusters and outbreaks, all of which were used to refine and develop targeted communications on TTI.

623. It is important to emphasise that the NI Executive, EIS, the Department and the PHA public messaging on TTI was, for the most part, integrated into overall public messaging on Covid-19 safety measures [MMcB7/274 - INQ000535694; MMcB7/275 - INQ000383025 and MMcB7/276 - INQ000535695]. This included consideration and advice on the suitability of material developed by the UK Government for NI. Therefore, advice on testing and isolation was promoted as part of the suite of NPIs available to the public to help protect themselves and others. There were not standalone public communication campaigns on TTI (although there was a series of TTI specific press releases by the Department and a chronology is discussed and exhibited at paragraph 642 below). This would have been impractical, counter-productive and potentially confusing given the need to encourage public adherence to all the key NPIs.

624. In NI, market research was commissioned by TEO through EIS to ascertain the most effective approach to communications. This involved engagement with focus groups representative of key target audiences with respect to NPIs including TTI. The findings of this market research informed the proposed public communications approach and campaigns over the relevant period, and were subsequently presented at meetings organised by TEO, and were shared with the CSA and me. We then provided public health and scientific input to the proposed communications approach and core messages. EIS appointed Genesis Advertising Agency in March 2020 to deliver a programme of multi-channel public information campaigns on Covid-19. Between March 2020 and June 2022, 26 different strategic and tactical campaigns were deployed under the overall message of "we all must do it to get through it". These included a number of campaign strands including Stay at home to save lives, Wear

one for everyone face coverings, Don't pass it on, Limit your contacts, Safe shopping, Vaccination roll out, Keep following the public health advice, and the launch of the StopCOVID NI app.

625. I understand that independent research reported that the 'we all must do it to get through it' campaign line was cited as trusted, promoting vigilance and togetherness [MMcB7/277 - INQ000535696]. Independent post campaign tracking reported on average that 84% people in NI agreed that this advertising stood out and was noticeable, and 8 of 10 people in NI agreed that the campaign would persuade them to take steps to protect themselves and others. Across the entire campaign period, the campaign was assessed as having reached nearly 100% of the NI adult population, with the social media campaigns reaching 1.1 million NI adults. A chronology of key dates across the campaign period include:

i. 25 March 2020 – NI Executive campaign urging citizens to heed public health advice, remain in their homes, follow hand washing advice and avoid social interactions [MMcB7/278 - INQ000535697];

ii. 4 June 2020 – the next phase of the NI Executive's Covid-19 public information campaign, urging citizens to follow the advice to "Stay Safe; Save Lives" and "Work Safe; Save Lives" [MMcB7/279 - INQ000535698];

iii. 6 July 2020 – new media campaign to prevent a second surge of Covid-19. The campaign was aimed at raising awareness of Covid-19 symptoms and the importance of testing in controlling the spread of coronavirus [MMcB7/280 - INQ000535699 and MMcB7/274 - INQ000535694];

iv. 31 July 2020 – public campaign to promote the newly-launched StopCOVID NI app which supported and supplemented the PHA's existing telephone contact tracing service. The campaign emphasised that the NI health service was using "Test, Trace, Protect" to help beat Covid-19 as a way to encourage the public to download the app [MMcB7/281 - INQ000373403]; and

v. 13 November 2020 – the next phase of the NI Executive's Covid-19 public information campaign, asking people to continue to follow the public health advice and limit contact with others [MMcB7/282 - INQ000535700].

626. A number of key sub-audiences were identified for the NI Executive's public information campaigns:

i. Those most at risk - aged 60 and over and those with underlying health conditions;
ii. Those living in economically disadvantaged areas;
iii. Young People;
iv. Ethnic Minorities;
v. People living in areas of higher transmission / local outbreaks; and
vi. Those who were least compliant.

627. These communications campaigns evolved over each wave of the pandemic taking account of survey and marketing data and in anticipation of further periods of increased transmission. The Department suggests that further relevant details can be best provided by the TEO and EIS if of assistance to the Inquiry, including in relation to, for example, the method of communication that was adopted and why. The NI Executive received updates and analysis on the feedback and engagement in relation to specific messages and media campaigns on a number of occasions. This information was all available to the Department and, along with the behavioural science inputs from the PHA and Scientific Pandemic Insights Group on Behaviours (SPI-B), also informed the approach that the CSA and I adopted in our public messaging and in media interviews.

628. The Department also worked with EIS and the PHA to develop guidance and infographics for the public on NPIs including TTI. These were translated into several spoken languages within Northern Ireland and communication campaigns were developed through working closely with a wide range of community sector representative organisations and communities.

The NI Executive Covid-19 Taskforce and the Adherence Subgroup

629. The NI Executive Covid-19 Taskforce (ECT) was established in December 2020 and was chaired by the interim Head of the NI Civil Service (HOCS). The role of this group has been considered in Module 2C of the Inquiry. In summary the initial role was to focus on four areas:

- Protect] Strategies
- Recovery]
- Adherence] Enablers
- Strategic Communications]

630. An Adherence subgroup of the ECT was established in or around February 2021, chaired at Permanent Secretary level and the Secretariat was provided by TEO. This was in response to the Health Minister's request to the NI Executive for a greater emphasis on enforcement and adherence to NPIs. The NI Executive's Covid-19 Taskforce Executive paper of 11 February 2021 stated [MMcB7/034 - INQ000348965]: "The objective of the adherence workstream is *"To maximise the extent to which individuals and communities adhere to the public health laws and guidance relating to COVID-19 and to provide input to the design of the restrictions proposed".*

631. Membership of the Adherence Subgroup of the ECT included a range of Government and public sector bodies and included representation from the PHA, and the Deputy CSA. The Department's Director of Communications was also a member. The Adherence Subgroup brought together stakeholders from across government departments and the wider public sector, and its role included gathering and monitoring data on public adherence to Covid-19 NPI measures and public messaging. It used behavioural science and other messaging techniques to find ways of presenting messages in an accessible and impactful way and received advice from the NI Innovation Laboratory and Behavioural Insights Team, part of the DoF, on adherence and enforcement issues relating to Covid-19 safety measures. These inputs and advice helped inform the NI Executive strategic communications and the Department's day-to-day communications on key areas including Covid-19 testing, self-isolation, contact with others, and adherence to the legislation about travel and

other matters. While neither the CSA or I were members due to other commitments, the Subgroup also utilised behavioural insights expertise to inform its work and wider communications activities. The CSA and I raised issues for further consideration by the Subgroup and shared scientific papers.

632. TEO may be best placed to assist the Inquiry with further detail on the work of the Adherence Subgroup and on the qualitative research it commissioned to inform the various stages of the NI Executive's public information campaign, including the use of both focus groups and polling. The Department's public messaging on TTI and wider Covid-19 safety measures also benefited from this research.

Methods and Developments in Communication

633. While less effective when rates of transmission are high, the ability of the test, trace, and isolate system to keep rates of infection under control relies on how well people adhere to guidance on testing, provide details of contacts, and self-isolate, which in turn depends on their knowledge, motivation, and opportunity to do so. As such, the method and content of the public communications and campaigns on NPIs more generally and TTI specifically was informed by behavioural science and monitored through UK-wide survey data collated and shared by the Cabinet Office with the Department and TEO as well as local survey data commissioned in NI which is referred to at paragraph 599 to 600. This was provided and considered on an ongoing basis and informed the content and method of approach adopted.

634. In the main, as described above, the public communications and campaigns included integrated advice on the importance of NPIs collectively as opposed to separate campaigns or communications with respect to TTI. This was important as the spread of Covid-19 presented many challenges, not least asymptomatic spread; therefore test, trace, and isolate, although an important component of the pandemic response, would never have been a complete solution and was more effective when the reproduction rate of the virus and community prevalence were low. Adherence to the advice on good respiratory hygiene, social distancing, adequate ventilation, and the wearing of face coverings indoors in public spaces were all important behaviours in reducing transmission, in addition to TTI. These communications developed and

evolved over the relevant period and were adapted, for example, in advance of anticipated increased periods of social mixing such as holiday periods or prior to the return of schools. In response to actual or anticipated increases in community transmission, messages were reinforced and the need to test if symptomatic and to self-isolate if positive was, again, highlighted. Behavioural science evidence was available to the Department, the CSA and myself through the Department's membership of SPI-B (which provided advice to SAGE), scientific papers considered and reviewed at SIG, and analysis provided by the behavioural science team within the PHA.

635. Behavioural science evidence showed that it was important that the public could see and understand the contribution and difference they were making and, in particular, the reasons for the NPIs, including TTI, and the evidence that these were effective in protecting others. While not the primary purpose, the establishment of the Department's public-facing Covid-19 Dashboard to enable transparent data sharing on cases, testing, disease progression and trajectory, along with the publication of the weekly R paper and the media's reporting and coverage of it, were in part designed to facilitate efforts in securing and maintaining the engagement, support, and trust of the public.

Monitoring Effectiveness of Public Communications on Behaviours and Attitudes

636. As described at paragraphs 599 to 600, there were several sources of evidence about the levels of public adherence to NPIs, including TTI. These included survey results and analysis of open-source mobility data (via Google) and a Coronavirus (Covid-19) Opinion Survey launched by NISRA on 20 April 2020 to measure how the pandemic was affecting people's lives and behaviour in NI. The reports focused on behaviours, including Hygiene Behaviour, Social Distancing, Face Coverings and Slowing the Spread of Coronavirus (Covid-19). For example, in addition to monitoring the level of public concern with respect to Covid-19 and the adverse consequences of the pandemic and NPIs on a range of health measures including mental health status and loneliness, this survey information provided regular data on what people did if they developed cold or flu like symptoms, the numbers who would book a PCR test, and the number of people who had taken a LFD test and why. In addition, the Department

commissioned QUB to conduct a contact matrix survey and Ipsos Mori, on behalf of the TEO, also conducted surveys which provided data on the effectiveness of communications in relation to NPIs, including those in regulation. This information was used to inform communications.

637. While the Department did not undertake any formal review or debrief of Departmental or PHA communications with the public around TTI, this ongoing monitoring demonstrated that adherence across the range of NPIs was reasonably good on the part of most of the public. The PHA may be able to assist the Inquiry with additional information.

638. Data on the effectiveness of public communications around TTI was also available through regular UK wide cross-sectional online surveys on adherence starting 28 January 2020. This was analysed as part of the CORSAIR (the COVID-19 Rapid Survey of Adherence to Interventions and Responses) study [MMcB7/283 - **INQ000196853** Surveys were conducted weekly until 1 July 2020 and thereafter fortnightly. The sociodemographic characteristics of participants in each survey wave were broadly similar to those in the UK general population. The weekly survey was resumed between 9 November 2020 and 13 January 2021 at times of increased transmission. The survey questions asked participants a series of questions to: identify the most common symptoms of Covid-19; assess self-reported adherence to self-isolation if symptoms were present; intention to self-isolate if symptoms were to develop; requesting a test for Covid-19 if symptoms were present; intention to request a test if symptoms were to develop; and intention to share details of close contacts. In general, the surveys demonstrated that adherence to test, trace, and isolate was reasonably good with some improvement occurring over time, suggesting some impact of public communications on TTI. The findings suggest that practical support and financial reimbursement were likely to improve adherence, and that targeting messaging and policies to men, younger age groups, and key workers might also be necessary. These findings were shared with NI Executive and the Adherence Subgroup and informed the Health Minister's correspondence with DfC in respect of support to those self-isolating and both the Department's and the PHA's communication approach on TTI.

639. The findings of the CORSAIR study suggests that more comprehensive use of behavioural science to focus on behavioural outcomes and further research to design and inform the evaluation of interventions to encourage behavioural change that improve motivation and support with barriers to behaviour change around TTI is required. The relevance of these findings and further research are important in the preparation for future pandemics. This is examined further at paragraph 726.

Challenges to Effective Communication

640. Public, political and media interest in the TTP Strategy and the TTI policy and approach was very high throughout the pandemic, given its central role in the response. The Covid-19 pandemic was the first pandemic to take place in the context of modern media communication, with 24-hour global media coverage and social media, and this presented both challenges and opportunities. There was much social media commentary on the approach and effectiveness of NPIs including TTI which the Department addressed in press releases by the Health Minister, to which the CSA and I provided input, and in addition through a series of 'mythbuster' articles (see paragraph 642 below). In general, most specialist health and scientific correspondents were well informed and provided effective challenge, providing further opportunity to relay key messages on the role and importance of NPIs including TTI. Throughout, the Department maintained a clear focus on promoting clear advice and guidance to help ensure that the public were informed of the risks and the actions they could take to keep themselves and their families safe and to protect the health service.

Department of Health Communications and Engagement

641. Public communications and messaging campaigns were key to this aim and took multiple forms, including through joined up working with other communications and media teams across NI government departments, the PHA, SPPG, HSC Trusts and local government and other stakeholders. While specific examples are provided, in general communications took various forms including:

    i. Written Assembly statements by the Health Minister;
    ii. Press conferences and background briefing and briefings to camera;

iii. Advertisements and media campaigns on television, radio and social media;
iv. Live and prerecorded interviews;
v. Digital bus stop advertising (Adshel);
vi. Meetings with specific sectors such as retail, the hospitality and large event sector, and the three sporting codes in NI; and
vii. Responses to media queries, for example on Covid-19 test centre provision, online booking availability, etc.

642. The Health Minister, CSA and I played prominent roles in the Department's public-facing messaging listed directly above, informed by the behaviour science evidence that showed (among other things) the importance of key trusted authoritative voices in communications with the public around the need for and importance of NPIs including TTI. The Department ensured regular and prominent updates were issued to the public and the media in relation to TTI policy updates and operational priorities [MMcB7/284 - INQ000400118 and MMcB7/285 - INQ000400113]. Specific examples of these updates featured, as appropriate, in the regular public communications from the Department, including:

i. Regular press conferences and media briefings by the Health Minister, CSA and myself, particularly in the early stages of the pandemic to emphasise the importance of adherence to the advice on NPIs including TTI. The CSA and I also provided briefing to the FM and the dFM in advance of their media appearances;

ii. Regular press engagements on radio and television by the Health Minister, CSA and myself. These media campaigns and interviews were organised by the Department's Press Office and / or by EIS;

iii. The Department issued a large number of press releases at every stage of the pandemic and throughout the pandemic response to update citizens on public health advice and guidance in relation to TTI policy and operational priorities [MMcB7/286 - **INQ000552983** These press releases and the public communication contained were informed by understanding of behavioural science, feedback on engagement, public health intelligence from the PHA and

engagement with key sectors in relation to clarity and accessibility of information and adapted accordingly;

iv. From 15 November 2020 onwards the Department published some 'mythbuster' articles intended to address misinformation and misunderstandings about Covid-19 and the actions taken in response to the pandemic [MMcB7/192 - INQ000381373];

v. Direct ongoing engagement by the Health Minister and senior Departmental figures, including the CSA and myself, with a range of stakeholders and representative groups, including with local government, faith leaders and groups, retailers, hospitality groups and the education sector. This engagement by the CSA and myself focussed on the importance of NPIs over the relevant time period, including at times of increased community transmission or anticipated increased social mixing, to encourage adherence to NPIs including TTI and asymptomatic testing as described in more detail later in relation to the NI SMART Programme;

vi. A number of Written Ministerial Statements [MMcB7/286 - **INQ000552983** around NPIs, including TTI, were made by the Health Minister to the NI Assembly and intended for onward sharing by Elected Representatives through their networks, for example in relation to publication of the Department's Test, Trace and Transition Plan [MMcB7/059 – INQ000348966];

vii. The Department also developed and refined several Apps which, alongside guidance published on NI Direct, the Department and PHA websites, assisted in keeping the public informed of the latest guidance on Covid-19 including in relation to testing, contact tracing and isolation;

viii. The Department ensured that content on its website was kept up-to-date and accurate in line with changing TTI policy and delivery priorities and was informed by survey data and public health intelligence on adherence and behavioural science evidence on how to best communicate and promote adherence. There was also ongoing engagement with NI Direct to update the guidance on its

website. The PHA also updated its guidance and communication in line with policy changes;

ix. The Department also initiated and funded an award-winning "Fight Back" PR campaign led by private sector PR professionals which, again, had a focus on the importance of NPIs including testing, contact tracing and isolation. The campaign encouraged well known sporting and entertainment figures in NI to develop and share Covid-19 safety messages including on self isolation and social distancing to help promote the messages across a range of media and social media platforms;

x. The Department issued hundreds of responses to individual pieces of correspondence from the public, public representatives and other stakeholders, responses to Freedom of Information requests, and responses to questions from MLAs and political parties. Due to the sheer volume of correspondence received, responding in a timely manner was a challenge for the relatively small policy team. There was also intensive reactive communications work, with a high volume of queries to the Department's Press Office reflecting media and public interest in NPIs generally, including TTI policy specifically, and the effectiveness of contact tracing, the availability of tests, particularly in the first wave of the pandemic and at times of increased community transmission. A key aim of the Department in responding was to help ensure transparency and to keep the public informed in relation to the TTP Strategy and the TTI policy and priorities, as they evolved during the pandemic;

xi. The Department also issued a significant number of circulars and guidance as necessary to the HSC, with the intention of keeping health and social care staff fully informed on developments on testing, access to asymptomatic testing with LFDs, contact tracing, isolation periods, therapeutic interventions, restrictions and NPIs, as new variants appeared and following the introduction of vaccination, including advice on travel restrictions.

643. The Department's strategic communication and media activity was supported by regular planning and engagement between the Health Minister and senior officials,

including the CSA and myself and the Department's Director of Communications. There were also weekly and ad-hoc meetings between the Health Minister, Permanent Secretary, CSA and myself to agree key messaging and communications including TTI policy and implementation. TTI updates were also a standing item on daily Strategic Cell meetings and associated calls, which I chaired until June 2020 and thereafter at the TTP Oversight Board which I also chaired, all of which aided communication flow and alignment of messaging and where communications on NPIs including TTI was addressed as a standing agenda item.

644. As described at paragraph 623, the Department worked closely with the PHA and with EIS to develop and review NI specific public health campaigns and communications, and to advise on the suitability of material developed by the UK Government for NI.

645. The Department also worked with the PHA on communication, in relation to, for example, the implementation of large-scale asymptomatic testing programs in care homes and other care settings, the asymptomatic testing of health service staff and other carers, asymptomatic testing in the education sector (also working with the DE and the EA), and targeted testing in areas of higher transmission.

646. The main roles of the Department's communications team during the pandemic included providing strategic communications advice and support to the Health Minister and senior officials including assisting the CSA and myself in the public facing aspects of our roles; organising and assisting with press conferences, speech writing, press releases, including policy and strategy announcements, responding to extensive media queries, social media output, and coordinating wider HSC communications. Throughout the pandemic, matters relating to TTI were an important feature of this work including, for example, messaging regarding testing centre provision, self-isolation, and changes to policy.

The Department's NI SMART Programme

647. Ongoing communications by the Department and PHA also played a key role in the success of the NI SMART programme. During the early stages of the programme, when key infrastructure organisations were being targeted (see paragraphs 276 - 278),

the Department worked closely with a former Chief Executive of Invest NI, who had extensive contacts and established credibility within NI industry sectors, to help develop its strategic approach to planning and delivery of messaging and communications. The NI SMART team also worked closely with DfE, TEO, DfC, Invest NI, local Councils and groups representing the Third Sector in NI to tailor its communications approach and to optimise its reach. Additionally, the NI SMART team used its wide networks to provide briefing and updates at regular intervals to the local news media and contributed to Departmental press releases to update citizens and businesses. The programme also had a dedicated communications lead to assist with the strategic approach to communication and messaging in order to help optimise reach and uptake of testing.

648. The NI SMART team identified that access to LFD testing supported by trusted community groups was a key potential mitigation in response to any potential for lower uptake of Covid-19 testing for people from minority ethnic groups. The NI SMART team, therefore, had a strong focus as part of the development and expansion of the programme on engaging with community groups in difficult to reach areas to assist with communication, to help break down barriers and to encourage uptake of testing. Community and Voluntary sector network organisations participating in NI SMART were also asked to cascade information widely though their own memberships. These organisations included, for example, the NI Council for Voluntary Associations (NICVA), Healthy Living Centre Alliance, Rural Support Networks, Community Development and Health Network (CDHN), and the Gaelic Athletic Association. Local councils were also asked to work with the community groups in their areas to ensure that messaging and information about testing reached people in their community.

Vulnerable, At Risk and Less Heard Groups

649. Policy teams across the Department, working collaboratively with SPPG and the PHA, undertook extensive programmes of engagement and communications with sector specific stakeholders, community groups and organisations across various programmes of care that were already supporting high-risk and vulnerable groups. This informed the development and update of sector specific guidance throughout the

pandemic which, whilst not specific to TTI, included updates to support compliance with testing and isolation requirements.

650. For example, as part of its Action Plan for assisting hard to reach groups, the PHA and its health protection and health improvement teams used established networks to work with community groups to develop culturally appropriate and language specific guidance on TTI for workers from ethnic minority groups in different sectors [MMcB7/037 - INQ000375903]. Guidance and communications in relation to the care home sector testing has been covered at paragraphs 312 to 314. While I was not directly involved, the Department also issued and updated sector specific guidance and communications across a range of other programmes of care supporting high-risk and vulnerable groups. These included, but were not limited to, domiciliary care and supported living (for example, Department Guidance 21 October 2020 [MMcB7/287 - INQ000130358 which includes the published guidance at the Annex A]; guidance for the management of Covid-19 in the following settings: Residential Children's Homes (for example, Guidance 10 May 2021 [MMcB7/288 - INQ000145687]); Foster Care and Supported Lodgings (for example, Guidance 22 December 2020 [MMcB7/289 - INQ000145693]); and Adoption Services (for example, Guidance March 2021 [McB7/290 - INQ000145701]). Detail on engagements with stakeholders to support the development of specific guidance and updates has been provided by the Department in previous statements to the Inquiry including Module 2C at paragraphs 500 – 568 of the Wave 1 statement [MMcB7/291 - INQ000411550]) and may be considered in future Modules of the Inquiry. Further detail to assist the Inquiry can be provided if helpful.

651. The Department also had a webpage which signposted users to Covid-19 Advice, such as advice on TTI for People with Disabilities including those who had hearing or visual impairment [MMcB7/292 – INQ000535701].

652. The Department also worked closely with other NI Civil Service Departments across the TTP Programme to support delivery and compliance with policies and guidance. Examples include:

    i. Working with DE, EA and PHA to support testing, tracing and isolation of pupils and staff in school and other educational settings (see paragraphs 315 to 324);

ii. Working with a range of other Departments including TEO, DfE and DAERA to support university and higher education students with adherence to public health guidance including testing and isolation over the Christmas and New Year period 2021/22 and return to campus for the new semester [MMcB7/293 – INQ000535702];

iii. On 23 April 2020, the Health Minister launched a remote interpreting service for sign language users [MMcB7/294 – INQ000346720], jointly funded with DfC. The service enabled British Sign Language and Irish Sign Language users to access NHS111 and health and social care services during the Covid-19 pandemic. The service was available 24 hours a day, 7 days a week; and

iv. Through the TTP Oversight Board, working with DfC in providing support to those that were self-isolating.

653. Recognising that some groups were at increased risk of adverse consequence as a result of the introduction of NPIs including TTI, the Department worked with the EIS to run a social media campaign in June and July 2020 to promote Childline, the NSPCC helpline and the 24 hour Domestic and Sexual Abuse helpline. While I was not directly involved, I was aware of the work which sought to address the unintended risks associated with the NPIs. For example, the Department provided funding to NSPCC to support a four-week awareness raising campaign in March 2021 to encourage families who needed additional support particularly during "lockdown" to reach out for help at an early stage and to encourage collective responsibility in continuing to report concerns regarding the safety of a child. A key element of the awareness raising campaign included a social media campaign (paid for advertisements and organic / free posts) involving a dedicated series of social media posts to promote local safeguarding agencies, family support and NSPCC services aimed at anyone who had concerns or needed support and to highlight the availability of free safeguarding awareness training that was being delivered by the NSPCC.

Public Health Agency (PHA)

654. The Department's Press Office worked very closely with counterparts in the PHA to ensure aligned and complementary communications campaigns and press releases. The PHA Assistant Director of Communications was, at my request , a member of the TTP Oversight Board which assisted with this aligned approach.

655. The Department was responsible for announcements and communications explaining the various strategic policy developments, while the PHA led on public information campaigns supporting delivery of the test and trace programmes. The PHA public information campaigns used, for example, TV and radio advertisments, social media and digital activity, and outdoor advertising. The PHA also had detailed online content about provision of test, trace and isolate services with links to isolation support services including detailed FAQs, and this was updated as the response to the pandemic evolved and at times of increased transmission.

656. Public campaigns highlighted the need to isolate immediately and get a test if someone developed symptoms, where to get a test, and explained the function of the contact tracing service and the importance of engaging with the Service. One such example was the PHA campaign launched 6 July 2020 which aimed to 'encourage testing and tracing those who have been in contact with someone who has tested positive for Covid-19'. The PHA communications at times also targeted specific demographic groups which might benefit from reinforcement of the TTI messaging, for example to further encourage adherence to TTI advice as part of the response to outbreak incident management. The Department was updated on this work at meetings of the Strategic Cell in the first wave of the pandemic and, subsequently, at meetings of the TTP Oversight Board. The public information campaigns function within the PHA was responsible for the overall development, management, implementation and monitoring of its multi-media campaigns. The PHA will be best placed to assist the Inquiry with further detail related to its significant programme of public information campaigns.

657. The PHA also had dedicated web pages setting out its guidance and advice including, for example, for people with a learning disability together with easy read versions of

Covid-19 guidance [MMcB7/295 – INQ000535703]. This was kept updated by PHA throughout the pandemic.

Modelling

658. The Department of Health conducted modelling of the overall course of the pandemic in NI, as discussed below. The outputs of modelling (in particular, the projected number of cases) was one strand of data that was considered in relation to TTI planning by the PHA. The Department did not carry out any specific modelling for TTI, although the CSA made recommendations regarding the number of contact tracers required during 2020 as described in more detail in paragraphs 670 - 673 below. To the extent that specific modelling was carried out to support TTI, this would have been done by the PHA and information should be sought from them if this would be of assistance to the Inquiry.

659. NI and specifically the PHA did not have established capacity in pandemic modelling which could be immediately stood up at the outset of the pandemic. In the initial stages of the pandemic, NI relied on UK modelling which was presented to SAGE.

660. At my request, the CSA established and chaired a NI Modelling Group at the end of March 2020, and this group played an important role in informing NI policy as the pandemic progressed. UK modelling (which included modelling of the pandemic in NI by UK modelling groups) was helpful but generally lagged behind NI local modelling which used the most up-to-date data to inform advice to the Health Minister and NI Executive. In addition, it was important to be able to respond to requests from key decision makers for updated modelling in a flexible and rapid way at key stages of the pandemic, and this flexibility required local modelling capacity.

661. The need for local NI modelling was mainly driven by the need for flexibility and responsiveness rather than any fundamental differences in the NI population compared with the rest of the UK, although such differences do exist (for example, a much lower percentage of ethnic minorities than elsewhere in the UK). The pandemic proceeded somewhat differently in NI, sometimes ahead and sometimes behind

progression elsewhere in GB, and timeliness and flexibility in NI specific modelling was therefore important in guiding advice to key decision makers.

662. Membership of the modelling group was drawn from the Department, PHA, Queen's University Belfast (QUB), Ulster University (UU), the Strategic Investment Board (SIB) and the HSC Trusts. Members are listed at [MMcB7/039a - INQ000353613] and varied somewhat through the pandemic. Minutes of modelling group meetings were taken (example at [MMcB7/040 - INQ000353614]), along with a note of key advice / decisions taken. Modelling group outputs informed advice given by me and the CSA to Ministers, the NI Executive and the broader system.

663. The NI Modelling Group considered modelling from a range of sources, including various UK modelling groups (through SPI-M-O) and NI specific modelling done locally as well as results on the ongoing Office for National Statistics (ONS) Covid-19 survey. As the pandemic progressed, the core model which the Department utilised was initially an SIR model (Susceptible Infectious Recovered) developed by the SIB member of the modelling group, and quality assured by a QUB member [see MMcB7/039a - INQ000353613]. As the pandemic evolved, this became a SEIR model (Susceptible Exposed Infectious Recovered). There was no formal contractual arrangement between SIB and the Department in relation to modelling, but later in the pandemic SIB entered into a more formal arrangement with PHA and the HSCB to provide modelling support to them. The NI Modelling Group mainly restricted its approach to NI wide modelling of short-medium term (up to six weeks) Covid-19 outcomes, particularly case numbers (when testing was steady), hospital admissions, hospital occupancy, ICU occupancy and deaths. The NI Modelling Group did not look at long term consequences of policy decisions or NPIs, either on health outcomes or the economy. Inevitably such modelling would have been associated with substantial uncertainties; appropriate data was not available to allow this, and modelling of economic consequences lay outside the remit of the group and the Department. There was no specific modelling in relation to TTI undertaken by the NI Modelling Group; however, the outputs of the Group were available to PHA to inform (along with other evidence) the development of TTI capacity.

664. As the pandemic progressed, the NI Modelling Group agreed estimates of Rt on a weekly basis (separately for cases and hospital admissions) which informed and were included in advice to core decision makers. These estimates were given in the form of a range which took account of estimates from the various models available and members' understanding of the likely uncertainties involved and were published weekly by the Department (see sample attached [MMcB7/041 - INQ000353615].

665. Assumptions used for modelling purposes, including estimated impact of NPIs including the effectiveness of TTI, were largely the same as those used by SPI-M modelling groups and discussed at SAGE in relation to virus characteristics and the extent of and persistence of population immunity.

666. Modellers received data updates on a daily basis throughout most of the pandemic, with occasional periods (holidays etc.) when data updates were less frequent. Data updates came from two sources – directly from the PHA and via the Information Analysis Division (IAD) in the Department, with data flows being refined as the pandemic progressed:

i. Hospital admissions and occupancy data came directly from the PHA and included an estimate of hospital occupancy as a result of community acquired infection and of nosocomial infection; and
ii. Total testing numbers and positive test results, along with Intensive Care Unit (ICU) data and deaths, came via IAD on a daily basis.

667. Positive test results in primary care, community settings and hospital settings were not reported separately in data flows coming to the NI Modelling Group. This information would have been available at the level of individual units within the Health and Social Care system (for example, wards, hospitals, HSC Trusts or care homes), but did not come to the NI Modelling Group, which focussed on NI wide modelling as described above. NISRA reported deaths on a weekly basis.

668. In general, these respective data flows were accurate and timely. Case numbers were heavily dependent on testing strategies and behaviours and, particularly in the earlier stages of the pandemic (through wave 1), the number of cases was a very significant

underestimate of reality due to limited test availability and the absence of widespread community testing. In addition, recording of hospital admission numbers with Covid-19 was dependent on coding, which occurred at a Trust level and was done manually. Consequently, there could be a delay of several days before all admissions on a given date were captured.

669. Outputs of modelling earlier in the pandemic included estimates of case numbers, hospital admissions, ICU numbers and deaths under a range of potential scenarios. As the pandemic progressed, the main focus became hospital admissions and numbers for future modelling scenarios. As described in more detail at paragraph 675, while there were demands from various sources for modellers to predict what would happen in the pandemic, the Department, the Minister and the CSA and I were always very clear in both written and verbal communication that modelling was not a prediction, but was mainly useful to indicate the range of possible outcomes in different scenarios. To assist in this, modelling was generally presented to include reasonable best case, reasonable worst case and a central case as the pandemic progressed.

670. The Department sought to develop a contact tracing service from the beginning of the pandemic, through the extant role and responsibilities of the PHA. Initial contact tracing was done on a case-by-case basis when case numbers were low and evolved as the pandemic progressed with the establishment of the Contact Tracing Service. The CSA provided advice as to the number of contact tracers who would be required in NI, based on best international practice, although the PHA ultimately decided on a different and smaller model, employing fewer contact tracers.

671. In relation to contact tracing capacity, the CSA provided advice to the PHA on three occasions around the required size of the service:

    i. On 20 April 2020 he estimated a need for 300 – 600 contact tracing staff would be required in NI and was assured that over 500 were in training. Based on the European Centre for Disease Control (ECDC) estimates from April 2020, this would have been sufficient for a contact tracing service to handle over 1000 cases per day [MMcB7/042 - INQ000346697];

ii. On 13 May 2020 CSA provided further advice to the Contact Tracing Steering Group meeting that in his view there would be up to 500 cases per day with a requirement to trace 5,000 people per day; and

iii. On 17 September 2020 the CSA met with the PHA and again indicated that the contact tracing service needed to be able to manage 500 cases and 5000 contacts per day.

672. The advice from CSA was based on modelling undertaken by the NI Modelling Group, and the scientific consensus that once community transmission was at an extremely high level the impact of TTI on transmission would be limited.

673. The PHA indicated at the meeting with the Department on 17 September 2020 that their current business case for the contact tracing service was on the assumption of 50 cases per day. Following a period of ongoing discussion and correspondence with the Department, an updated draft business case was subsequently submitted by PHA to the Department for consideration on 3 November 2020 taking account of the CSA advice. The final business case as approved by the Department gave the PHA authority to flex the contact tracing service depending on the extent of virus transmission. Efforts by PHA to recruit additional contact tracing staff were ongoing in the interim pending development and approval of the business case. During this period, the PHA had been advised by the Department that funding approval and resourcing would not and should not be regarded as an impediment to an appropriately staffed contact tracing service model.

674. Contact tracing is most effective when the prevalence of an infectious disease and the number of cases are relatively low. The PHA maintained contact tracing throughout the epidemic; though at times of very high prevalence the efficiency of the service was reduced and the impact, in terms of reducing transmission, will have been minimal, the Department considered that the maintenance of the service was important in terms of public messaging and perception.

675. As described at paragraph 669, throughout the pandemic there was substantial pressure to 'predict' what might happen next, and the Department sought to

communicate clearly and consistently that modelling was not predictive, but was intended to illustrate what might happen under a range of scenarios. This was repeatedly made clear in the R paper and was continually said by the CSA and myself in media briefings and press interviews. This was also clearly articulated by the Health Minister in a statement on 2nd April 2020 when he said: *"It is important to emphasise again that this modelling work is not a prediction or forecast. All modelling necessarily carries a level of uncertainty. It is therefore prudent to plan for a scenario beyond the reasonable worst case. That is what we are doing".* To reflect the uncertainty which underlies all modelling, both in terms of data and assumptions, as previously described modelling outputs were presented to Ministers to include a best-case scenario, worst case scenario and reasonable worst-case scenario [MMcB7/043 - INQ000137368], or for a range of potential values of Rt. In almost all cases, the eventual observed outcome fell within the range of possibilities provided for the following 4 – 6 week period.

676. Projections provided by modelling are dependent on the existence of data and underlying assumptions. The more relevant the data that can be built into a model and the stronger the evidence base for necessary assumptions, the more likely it is that the model will produce more reliable projections. Another challenge was that at the onset of the pandemic limited data was available about Covid-19 and there was obviously no available time series of data. Projections were used to extrapolate trends into the short to medium term (a few weeks) to show how current rates of growth or decay would change trajectories of key metrics such as hospital admissions and deaths. This assumed that no policy or behavioural changes affected the trends observed at the time. The assumptions underpinning modelling work in these early months was part derived from how similar viruses had behaved in the past. These projections were of how the value of R was expected to change, in a range of values (upper and lower value) and based on assumptions included in the model. The results of modelling work during the pandemic served as an important tool to aid decision making [MMcB7/044 - **INQ000137370**. As discussed above at paragraph 663, modelling outputs were one piece of evidence which informed TTI decision making, which was based on the totality of evidence available.

677. There was not initially any independent group of scientific experts in NI to consider SAGE papers and outputs, the outputs of SAGE subgroups and other scientific papers and reports from an NI perspective and to inform scientific and medical advice to the Health Minister and the NI Executive. On or about 27 April 2020, the CSA established the Strategic Intelligence Group (SIG) for this purpose with the agreement of myself as CMO and it met regularly and provided advice throughout the main phases of the pandemic. SIG included representation from the PHA, Queen's University Belfast, Ulster University and Oxford University as well as the Department, from a range of medical, scientific and other disciplines. Members were selected and approached to cover relevant areas of scientific expertise. The terms of reference, membership and areas of scientific expertise are provided in [MMcB7/045 - INQ000183441]. SIG met at varying intervals, depending on the state of the pandemic, the emergence of new evidence and the need for scientific advice, and considered emerging evidence around TTI along with many other issues. SIG had no specific role in relation to TTI modelling however outputs of the NI Modelling Group were considered by SIG, PHA and HSCB and informed advice and decision making around TTI, as part of the totality of evidence. HSC Trusts had no role in TTI policy decision making.

678. As discussed above, from an early stage in the pandemic the Department recognised that TTI was most effective when community transmission of the virus was relatively low and would be significantly less effective when community transmission was high. There were multiple reasons for this, including behavioral factors and the increasing number of unidentified cases at high levels of community transmission. The outputs of the Rùm Model reinforced our understanding of the limited effectiveness of TTI when transmission was high but did not significantly alter the approach of the Department to test, trace and isolate policy.

679. In terms of modelling, it was not possible to assess the specific effectiveness and accuracy of the TTI system in NI due to the wide range of factors which influenced the transmission of the virus at any point in time. When modelling the likely impact of TTI, the NI Modelling Group aligned with the assumptions used by SAGE / SPI-M modelling groups and utilised these assumptions within NI specific modelling. Modelling of the overall pandemic was generally conducted only at a NI wide level so did not consider varying levels of infection in different areas or related demand for tests. This was

mainly because of the relatively small geographical size of NI and the relatively small population compared to other parts of the UK. The contact tracing service performance data is covered in the Contact Tracing section of this statement.

Data to Inform Development, Monitoring and Review of TTI

Data Collection and Use Across TTI

680. Data collection was a critical component of the Covid-19 response, and the processing of this data was necessary to support all organisations involved in the response to the pandemic. There was a wide range of data sets, and supporting data collection and flows, which were used by the Department to develop and maintain TTI systems from a strategic perspective and to support TTI decision making, and which also supported the wider public health response. The PHA led on the operational development and delivery of TTI testing and contact tracing systems and would be best placed to advise on the detail of data or sets of data it used to develop systems however I have also provided some information in paragraphs 681 and 682 below in relation to my understanding of PHA systems and the support provided by the Department, in order to assist the Inquiry.

681. Data in relation to TTI was considered by a variety of groups and individuals. This included the CSA, myself, the PHA, the NI Modelling Group, SIG and others. Data was used to inform the advice provided by CSA and myself to the Health Minister and to the NI Executive throughout the pandemic, and to inform decision making in relation to TTI policy. The data from the TTI system was provided in verbal updates to the NI Executive by the Health Minister, and in written papers to the NI Executive. Data was also used routinely to inform targeted operational public health interventions by the PHA. The following are examples of the types of such data and analysis, including data sources, that was used to inform advice and decisions by the Department and the PHA, and a description of the processes and data flows by which data was made available to decision makers and to the NI Executive:

i. From 12 February 2020, the PHA produced a daily surveillance report which initially included data on testing and positive tests. By 20 March 2020 this report was being published as a bulletin and its content expanded to include data on Covid-19 deaths and to provide analysis of positive Covid-19 cases by geographical area, age and gender, and Surveillance of Acute Respiratory Infections consultations in primary care.

ii. As has been described more fully at paragraphs 289 to 298, the Department's Information and Analysis Directorate (IAD) provided a daily 'Testing and Deaths report' as part of its Covid-19 Dashboard reporting, that continued to expand in scope. The PHA daily bulletin referenced in the point immediately above was stood down when the Covid-19 Dashboard commenced in mid-April 2020. The Covid-19 Dashboard was updated throughout the pandemic and provided a common data set which included a wide range of data in relation to testing and infection rates for example:

- the number of individuals testing positive;
- the rate of individuals testing positive per 100K population;
- the total number of individuals tested by Local Government District;
- breakdowns of the number of individuals testing positive by Local Government District, gender and age bands;
- information on outbreaks including in care homes and the extent of outbreaks; and
- hospital beds available and occupied; Intensive care Unit beds available and occupied including the number occupied by Covid-19 patients; and the number of Covid-19 discharges.

iii. The Covid-19 Dashboard was shared on a daily basis with the Health Minister, CSA, myself, and other key individuals. Analysis of this data by the NI Modelling Group and others was ongoing and informed a range of policy and operational actions in relation to testing and contact tracing, and supported reporting to the public and to the NI Executive. Development and evolution of TTI policy and operational delivery was informed, in particular, by data relating to testing, testing capacity anticipated case numbers and numbers of relevant contacts of cases.

iv. On 28 May 2020, the Department submitted to the NI Executive the first 'R' paper produced by the NI Modelling Group with 'R' based on hospital admissions data. The 'R' paper was accompanied by a second paper which provided briefing and data, including on confirmed cases, deaths, tests, cases in other UK jurisdictions, cases in care homes, cases and deaths in RoI, testing capacity, and numbers of tests of staff and residents in care homes. From 8 June 2020, the Department published 'R' data alongside 7 day rolling average figures for new cases and hospital admissions. The 'R' paper was also submitted weekly to the NI Executive by the Health Minister and was presented by myself and the CSA verbally at NI Executive meetings for discussion.

v. The PHA captured and reported a suite of surveillance and epidemiological information. For example, the PHA published weekly information relating to cases, incidents, clusters and outbreaks [MMcB7/256 - INQ000432329]. The information was captured through Enhanced Contact Tracing, testing, and public health risk assessment and management of incidents, outbreaks and clusters. This information was also discussed at weekly Clusters & Outbreaks Meetings [MMcB7/257 – INQ000447245, MMcB7/258 - INQ000447246, MMcB7/259 - INQ000400873 and MMcB7/260 - INQ000459443] and on an ad hoc basis with the Department. The analysis of these by setting helped to inform the advice that CSA and I gave to the Health Minister and to the NI Executive in relation to the effectiveness of and adherence to restrictions in different settings and activities, and also informed discussions about what impact specific easements in restrictions were having on transmission and incidence of Covid-19. The same intelligence on clusters and outbreaks informed discussions on the need for targeted local actions operationally led by the PHA and other agencies. For example, this included discussion on clusters and outbreaks related to activity in particular settings and sectors and the potential wider implications for increased transmission in local communities and subsequent engagement and actions taken by the PHA in terms of, for example, targeted communication or increased locality testing.

vi. The PHA also maintained local management information systems to assess and report its performance in relation to the contact tracing service – including for

example the volume of cases and contacts successfully traced, the number of positive cases contacted within 24 hours, the number of close contacts contacted within 48 hours of notification to the contact tracing system, the number of telephone attempts made to positive cases, and the uptake and usage of digital self-trace. This data was disaggregated and used internally by the PHA to inform its decisions regarding planning and operational delivery of the Contact Tracing Service and was publicly reported in the PHA Weekly Bulletin. It was also discussed with the Department as part of oversight arrangements. In addition, TTI development and policy was informed by daily feeds and modelling provided by the NI Modelling Group in relation to case numbers. In addition, there were a variety of other data sources which contributed to overall understanding of the course of the pandemic and cluster management, and which therefore indirectly informed the development of TTI and implementation of TTI, and advice to the Health Minister and to the NI Executive where relevant.

vii. In terms of data relied upon to develop the TTP contact tracing systems, the PHA received data twice daily from the Central Test Registry in relation to positive cases which enabled the contact tracing process to commence. The Department does not now hold a full list of this data, but it included for example the name, date of birth and contact details for the positive case. The data was received direct from the National Testing Programme and was based on the information provided by the individual booking and taking the test. The PHA supplemented this data with further data collected during its call with the positive case, for example in relation to ethnicity, vaccine status, whether anyone in the household worked in a healthcare setting, details of close contacts, and recent travel history. The PHA would be best placed to provide further detail in relation to this data collection and how the data was used to develop the TTP contact tracing system.

682. There was also a wider range of TTI related datasets, systems and processes that were in place for the collection, disaggregation and use of data supporting the TTP programme and public health response, and which were used to inform policy decisions by the Department and operational decision making by the PHA. Again, these processes were supported and used by a number of individuals, groups and organisations as described in the points below. These included:

Public Health Response

i. QUB, RVL and the PHA maintained data systems in relation to Whole Genome Sequencing (WGS) testing undertaken on suitable samples from both Pillar 1 and Pillar 2. WGS testing was used to confirm the identification of new variants and to support risk assessments and public health response by the PHA. Data was used to inform targeted public health responses guided by the PHA, including for example targeted outbreak testing, assisting in the attempted containment of initial transmission of more transmissible variants or those with increased disease severity. Further relevant detail is described at paragraphs 398 to 402 .

ii. Wastewater Testing: QUB developed a GIS-based (Geographic Information System) interactive dashboard to present the results from wastewater testing and provided a weekly WW surveillance summary report to the PHA and to the Department indicating prevalence across the tested sites, sequencing outcomes and comparisons between normalised wastewater data and ONS data. The findings were shared in a weekly summary report [MMcB7/261 – INQ000535684] with DAERA, the Department (including the DCMO and CSA) and the PHA (including the chair of the EAG-T and surveillance leads) to inform the public health response. Further detail on wastewater testing is set out at paragraphs 408 to 410.

iii. The PHA closely monitored available test capacity and usage across all Pillar 2 PCR sites daily [see MMcB7/094 – INQ000530964]. This analysis informed a series of actions including decision making by the PHA regarding the location of test sites and tactical changes in location of Mobile Test Units. Analysis of this capacity/demand data also informed engagement with DHSC / UKHSA to request additional Pillar 2 PCR capacity for NI in times of peak demand. The Department and the PHA had restricted access to DHSC / UKHSA Tableau data systems in line with stated requirements which enabled access to these datasets.

iv. The Pathology Network maintained a range of data regarding Pillar 1 testing capacity for PCR and for new testing technologies. This was reported weekly to EAG-T and

to the Health Minister and was used to inform capacity optimisation and resilience planning across the Pillar 1 network.

v. Datasets were available related to activity at the Managed Quarantine (MQ) facility for travellers returning from Red listed countries. The MQ facility was managed and overseen under UKHSA-led contracts. UKHSA maintained Standard Operating Procedures for contractors covering all aspects of staff, visitor and guest testing. This included data flows and recording requirements for Covid-19 test results. High-level data on daily tests undertaken was provided to the Department and the PHA. This was triangulated with other data to inform ongoing wider risk assessment and public health response measures where relevant.

Sectoral Data

i. As has been described at paragraphs 315 to 316, testing in schools and schools for those with special educational needs was delivered through close joint working between the PHA and the Education Authority, supported by policy colleagues in the Department of Health and the Department of Education. This included close monitoring of data sets in relation to for example the volume of tests undertaken and the positivity rates, and the type of test used (PCR, LFD and LAMP technology). This data was used to inform policy and operational changes in relation to testing in schools and where necessary consideration of direct public health interventions for example in relation to clusters and outbreaks.

ii. The PHA collated data on the Covid-19 testing programme in care homes and produced a monthly Care Home Testing Report which summarised relevant testing data from Pillar 1 and Pillar 2. The reports comprised a range of information including: the numbers of Covid-19 tests completed by Pillar each month; Covid-19 positive and negative test results attributed to Care Homes; the number of Covid-19 tests undertaken by residents' age; and the pattern of symptomatic and asymptomatic Covid - 19 outbreaks in Care Homes [see MMcB7/190 – INQ000432670]. The PHA acknowledged that there were some gaps in the information which impacted data quality and the ability to provide comprehensive and accurate reports for the care home testing data. This included instances where the

name of the Care Home was missing or health and care numbers were not provided for individuals who had been tested, which impacted the granularity of the information provided. The Care Home Testing Reports supported operational decision-making by the PHA including risk assessment and support to inform outbreak management and also proved a valuable source of information providing the Department an overview of the significant scale of Covid-19 testing being undertaken across Care Homes and importantly testing outcomes.

iii. The PHA also closely monitored the turnaround times (TATs) for PCR Pillar 2 testing, including for testing in care homes. The PHA worked with DHSC / UKHSA as necessary to inform operational actions. Operational updates in relation to TATs were also provided by the PHA to the Care Home Task and Finish Group as required. The Department suggests the PHA would be best placed to assist the Inquiry with any further detail required.

iv. The NI SMART team monitored and utilised a range of data sets to inform its weekly Dashboard [MMcB7/262 – INQ000535685]. They extracted data from the Tableau data system and were provided with targeted datasets that UKHSA had extracted from Egress and Salesforce to compile the Dashboard. The NI SMART team used this data to ensure sufficient stock levels of LFDs were available and accessible to NI citizens and to support a range of other actions for example to identify those business sectors that were/ were not availing of the Workplace Testing offer which in turn informed communications and messaging.

v. In December 2020, at my request, the Department established a regional Nosocomial Support Cell (NSC) as part of the Department's approach to supporting Trusts to address the challenges arising from Covid-19 in healthcare settings [see MMcB7/026 – INQ000185385]. As part of this work, the Department also commissioned the development of a Covid-19 Nosocomial Dashboard which provided Trusts with close to real time access to data on Covid-19 infections that had arisen in hospital settings. The key objective of the NSC was to provide multidisciplinary support to the region and HSC Trusts experiencing clusters or sustained complex outbreaks of healthcare associated Covid-19 infections in acute

settings and to inform targeted actions required; this work was supported through the data provided by the Nosocomial Dashboard.

vi. The Department also established processes with BSO to enable positive Covid-19 test results to be visible within the Northern Ireland Electronic Care Record system (an existing system which captured data on an individual patient level and was accessible in HSC clinical departments including Emergency Departments) to support direct clinical care.

683. The range of data and related reporting outputs and dashboards set out in paragraphs 681 and 682 above were considered on an ongoing basis as appropriate across the range of operational meetings and oversight boards supporting delivery of the TTP Strategy - at both strategic level in the Department and operationally by the PHA. This included for example the TTP Oversight Board; NI SMART Programme Board, the Clusters & Outbreaks meeting, the Department's EAG-T, the Care Home Task and Finish Group, and the Wastewater Surveillance Group. It was my view then, and remains so now, that all the data collected through the TTI system was of utility. I do not recall any particular dataset being of limited utility as no single piece of data was considered in isolation, rather it was the combination and triangulation of all data and information, together with evidence from the numerous sources described alongside expert advice and recommendations, that informed decision making.

684. Consideration of quantitative datasets was supplemented and supported by consideration on an ongoing basis of other information, evidence, expert consensus recommendations from a variety of sources – local, national and international - to help inform the development of TTI policy advice and decision making. As has been described in paragraph 60, this included wider scientific and public health advice including, for example, from SAGE and its sub-groups; recommendations from other international and European groups such as the World Health Organization (WHO) and the European Centre for Disease Control; emerging evidence and presentations at the UK Senior Clinicians, and discussion at the 4 UK CMOs meeting; and also, from local groups including EAG-T, SIG and the NI Modelling Group. Departmental officials, the PHA and other members of the EAG-T also had a network of wider ranging and well-established links throughout the pandemic with UKHSA and the National Testing

Programme, and with policy and professional counterparts in the other DAs and in the RoI. As such there was consideration of emerging evidence and information continuously throughout the pandemic to inform the development of the advice on approach to testing policy options and across TTI.

Research and Studies

685. NI participated in several surveillance studies including the Office for National Statistics (ONS) Covid-19 Infection Study, REACT and SIREN. In addition, there were participants from NI in the ZOE Covid-19 symptom study. Findings from the ZOE study were considered as appropriate by the Department and the PHA as part of the wider available evidence base. There is no specific documented analysis of how the data collected from the ZOE study was used by the Department to inform decision-making. The emerging and ongoing findings from these and other relevant studies and research were discussed, when relevant, at a range of national and local fora including SAGE / NERVTAG, UK Senior Clinicians and UK CMOs, and relevant PHA and Departmental Groups (EAG-T, SIG, NI Modelling Group). This evidence informed advice on relevant aspects of the pandemic response including TTI, which was generally given by the CSA or myself either verbally or in papers submitted to the NI Executive by the Health Minister.

686. The primary aim of the UK Covid-19 Infection Survey was to estimate the incidence and prevalence of Covid-19 and the proportion of the population with antibodies. The survey over time helped track the extent of infection of Covid-19 among people living in private households. Typical outputs included modelled estimates for each UK country, an assessment of trend, analysis by age-group, and variant analysis. Data from the survey were included in the R paper, which was presented each week to the NI Executive, and the R papers were also made publicly available.

687. NI specific weekly and fortnightly publications were produced by IAD on infections and antibody levels in the population. The ONS produced a more detailed slide pack which was provided as early information to the Department including to the CSA and myself and was used to inform the Health Minister and NI Executive regarding the response

to Covid-19. In addition to NI results, the slide pack also provided up-to-date trend results from the survey for the other UK countries for comparative purposes.

688. Once the Joint Biosecurity Centre (JBC) was established, outputs and data from them were considered as part of overall decision making with respect to the potential risk of the introduction and impact of new variants as a consequence of international travel.

Effectiveness of Data Sharing

689. The Department considers that a key strength of the pandemic response in NI was that, due to the relatively small size of the health and care sector, NI often had the ability to bring key decision makers and partners together into operational working groups and Oversight Boards. This also extended, where beneficial, to involving partners from outside the immediate health delivery sector to include academics, researchers and representatives of commercial industry and other partners. This joint working and collective endeavour was, in my view, based on and benefited from an obvious shared commitment to deliver an effective pandemic response on behalf of the citizens of NI and to mitigate the consequences in so far as possible. Further, due to the emergency and fast paced nature of the evolving pandemic response, governance structures needed to be flexible and agile. Again, the relatively small size of the sector in NI and the relationships built up over time were found to be a key strength and assisted with data sharing between different departments, bodies and organisations. While further detail of these groups is in paragraphs 71 and 72 and paragraph 245, some good examples of this agile and responsive joint working in relation to TTI include the Test, Trace, Protect Strategic Oversight Board; the Department's EAG-T which included links to the Covid-19 Scientific Academic Consortium on Testing; the Care Home Task and Finish Group which assisted in linking with key sector stakeholders and advocates for example the Commissioner for Older People; the NI SMART Programme Board with links to local councils, business and the third sector; and the Wastewater Testing Programme Oversight Board which was a good example of agile and effective cross Departmental and cross sectoral work on a complex and innovative project. In my experience, there was highly effective working across normal organisational boundaries and the Department and the entire HSC systems, and key stakeholders worked in general collectively and collaboratively.

690. The PHA leadership team, the Department's CMOG and both policy and professional colleagues, and I, by necessity, building on long established working relationships, worked very closely as a collective leadership team. This strong collective team working across organisational boundaries was in my view, in the main, a key strength which supported agile and responsive data sharing to help inform policy options and decision making, for example to assist in addressing ad hoc queries as these rose from the Health Minister, the NI Executive, or from the public and public representatives. This access to the latest data helped support open and transparent governance in relation to TTI decision making. This close joint working also provided mutual support and assistance to ensure that the public health response was appropriately directed and coordinated, and that the PHA was best placed to meet emerging and evolving challenges, and the many demands faced over the course of the pandemic.

Challenges with Data and Access to Timely Data

691. Throughout the pandemic new data sources and information flows were established and developed across the pandemic response and including in relation to TTI. The data available to the Department in the first few months of the pandemic was limited compared to what became available in later months and years. The rapid expansion of testing in NI necessitated the provision of timely Covid-19 data reporting to inform policy, support operational decision-making and to facilitate monitoring of testing capacity and activity. There were some challenges early in the pandemic obtaining reliable, accurate and timely data in relation to Covid-19 testing. Business as usual data capture and reporting mechanisms in place at the time of the outbreak were not sufficient to support the response to a Public Health Emergency such as Covid-19 and it was necessary to create many new data capture and reporting systems. In many ways this was a particular challenge for NI given that the Department and the PHA had by comparison significantly less resource available to it as compared to other UK jurisdictions.

692. The initial phase of the pandemic, in particular, was highly complex and rapidly evolving, and there was an urgent need to develop robust arrangements to ensure the

timely sharing of accurate and up-to-date information. These challenges were the same across the UK as we sought to ensure robust and comparable data sets to track the pandemic. The PHA worked at pace with public health and policy colleagues across the UK to agree definitions and associated systems to capture information on cases, contacts, deaths, and numbers in hospital. The approach adopted by the PHA was similar to that of other public health bodies in the UK. Throughout the pandemic the PHA continued to work closely with the Department and with colleagues across the UK to both collect and report public health data on the progress of the pandemic. DHSC / UKHSA also worked at great pace to establish data systems and data flows with DAs to support the operation and delivery of the NTP. Some of these data systems have been described at paragraphs 681, 682 and 683 above together with a summary of the use of the data by the PHA and the Department's NI SMART team.

693. Data flows were mostly accurate and timely following the initial months of the pandemic, and the CSA liaised with PHA colleagues in relation to this. Particularly in the earlier stages of the pandemic and throughout wave 1 the number of confirmed cases significantly underestimated the true number due to limited testing capacity and the absence of widespread community testing.

694. There were difficulties in NI in that routine data flows did not allow the identification of trends in the transmission and infection rates of Covid-19 within some community population groups including those of different ethnic backgrounds, and it is recognised that this needs to be addressed. Available data did permit identification of trends in geographical areas by council areas or post codes, and detailed analyses of trends and impacts based on age, sex and socioeconomic deprivation which was used to inform policy across the pandemic response. Due to poor coding of ethnicity in health care records it was not possible to look at trends in those from different ethnic backgrounds. With regard to the possibility of considering ethnicity trends in any future pandemics, the roll out of the 'Encompass' programme which is an integrated digital Electronic Health Care Record across the HSC Trusts should allow for more robust collection of patient ethnicity data. However, it would remain the case that quantitative analysis may remain difficult due to the very small number of individuals from some ethnic backgrounds in NI.

695. The Department has recently published a Data Strategy [see MMcB7/052 – INQ000183443] which includes the commitment to the establishment of a HSC Data Institute. As is described at paragraphs 130 to 140, there is now also increased emphasis on data acquisition and data flows within the PHA and all of these measures, together with the rollout of the Electronic Healthcare Record, will collectively help to ensure that data flows should be improved during any future pandemic.

Reviews of Data Flows

696. Personal data from TTP was held securely within the system in line with data protection requirements. There was no requirement or need for decision-makers or policymakers in the Department to have access to personal level data from testing and contact tracing systems. Public confidence in the confidentiality of the retention and use of this data was essential in maintaining voluntary engagement with contact tracing, the sharing of information on close contacts and the potential setting and activity associated with infection. To assess the effectiveness of the contact tracing service policy makers and decision makers did need access to reports on the performance of the contact tracing services, including performance data on the numbers of people testing positive contacted within 24 hours, the numbers of contacts per positive case, and the number of their contacts contacted with 48 hours. These performance measures were based on the recommendation from SAGE that for contact tracing to be effective at least 80% of close contacts of index cases needed to be traced within 48 hours. It was also important for decision-makers and policymakers to have information on potential place of infection as this contributed to knowledge of the effectiveness of NPIs and helped inform public messaging on reducing risk of exposure.

697. As described more fully in the Section on "Tracing", throughout the pandemic, the PHA produced weekly reports on the performance of contact tracing which reported on for example the total number of positive cases reported to the Contact Tracing Service; the number of cases successfully contacted; the total number of contacts identified and successfully contacted; and the average number of contacts identified by cases that have been successfully reached. This data was presented by PHA together with performance metrics regarding the percentage of cases contacted within 24 and 48

hours, and the percentage of contacts contacted within 24 hours and 48 hours. This performance data was reported by the PHA and discussed at the weekly TTP Oversight Board. Performance updates were shared with the NI Executive and were publicly available [MMcB7/263 - INQ000438790]. The PHA also published a weekly Cluster and Outbreak Report indicating at a high level the potential place of infection for example workplace, retail, or hospitality [MMcB7/264 - INQ000587508]. Again, the findings of these reports were discussed at meetings with CMOG at a weekly Cluster and Outbreak Meeting. This weekly report was also discussed at meetings of the NI Executive to inform consideration of the effectiveness of NPIs, and mitigations in place in these settings and adherence. This data also informed the NI Executive's assessment of the relaxation of restrictions in these settings.

698. As described at paragraph 681 above, the flow of information and data from TTP was sufficient to inform policy, along with multiple other data sources. I have described in the section on "Tracing" in this statement detail of the rapid review of the contact tracing service which I commissioned on the 3 October 2020 which made a number of recommendations including those aimed at improving data analytics. Further detail on this report and its recommendations are described at paragraph 719.

699. Further, learning from the Covid-19 pandemic more generally with respect to testing and contact tracing and its scalability has been considered more fully in the UK CMO Technical Report to which I contributed [see MMcB7/021 – INQ000177534] as previously described, and I have reflected these in paragraph 723.

Adapting to a Changing Virus

700. In relation to ongoing monitoring, development and evaluation of the TTI systems, including how systems would need to develop to a changing virus and how this is factored in, this has been described across the body of the statement. As has been described, policy and supporting operational delivery systems were kept under continuous review by the Department, the PHA and other delivery partners and were updated dynamically throughout the pandemic taking account at all times of new and emerging professional, policy, scientific and public health advice. Staff involved in

planning and operational delivery of the TTI system were fully appraised of this information and utilised it in anticipating periods of increased demand following the appearance of new virus variants or changes in NPIs or testing strategy. This included making use of opportunities presented by innovations in testing technologies and technological innovation to support contact tracing. I have also described how the potential for changes in the virus were including the potential for new variants to emerge and the importance of scaling up whole genome sequencing in that regard. I have also described the flexing of operational delivery of testing and contact tracing in periods of peak demand and in response to higher rates of prevalence at different stages throughout the pandemic.

Consideration of International Models of TTI

701. Early in the pandemic (20 April 2020), CSA provided advice to the PHA based on best international practice estimating a need for 300 – 600 contact tracing staff in NI and was assured that over 500 were in training. Based on the European Centre for Disease Control (ECDC) estimates from April 2020 and consideration of other international practice, this would have been sufficient for a contact tracing service to handle over 1000 cases per day [MMcB7/042 - INQ000346697]. The PHA would be best placed to provide further detail of how they used this information in planning and delivering the TTI service.

702. Aspects of International models of TTI systems and policies were considered in general terms on an ongoing basis to inform the development and evolution of TTI in NI. This included relevant evidence papers and discussion at national meetings including SAGE and its subgroups. An example of this is in relation to early considerations of the use of LFDs for asymptomatic testing at population level when these first emerged in late 2020 / early 2021 and consideration of the emerging evidence from early pilots in European countries in addition to pilot testing in the UK. International approaches and the evolving evidence base regarding isolation periods were also considered by the CSA and myself and discussed at UK CMOs meetings and in supporting professional groups to inform updated advice and recommendations in relation to isolation for positive cases and close contacts. The Cabinet Office and the NI Executive Covid-19 Taskforce (ECT) produced an ongoing analysis of the steps

taken in other countries and some analysis of their effectiveness. SAGE considered and provided advice on the effectiveness of individual measures and their cumulative impact. SIG also considered a range of papers looking at approaches in other countries.

Targets

Use of Targets across TTI Policy to Assess Effectiveness

703. The delivery of testing strategies, policies and operational delivery of testing and contact tracing were kept under continuous review and monitored on an ongoing basis by the Department working with the PHA and other delivery partners. As described for example at paragraph 6, testing policy was continually reviewed and updated taking account of new and emerging scientific and clinical evidence, information and best practice recommendations – local, national and internationally. This included taking account of both qualitative and quantitative data.

704. As described at paragraphs 678 to 679, the Department recognised that TTI was most effective when community transmission of the virus was relatively low and would be significantly less effective when community transmission was high. There were multiple reasons for this, including behavioural factors and the increasing number of unidentified cases at high levels of community transmission. However, in the Department's view and in my professional opinion, it is not possible to assess the specific effectiveness of testing strategies in isolation in terms of limiting transmission of the virus, due to the wide range of factors which influenced the transmission of the virus at any point in time. The NI Modelling Group, in line with other UK modellers, made assumptions about the effectiveness of TTI for scenario modelling purposes.

705. The Department required the PHA to develop a TTP service which would be as effective as possible at suppressing transmission of the virus and required the PHA to report against this strategic aim. However, the Department did not set specific targets in respect of delivery of the TTP Strategy, rather requiring the PHA to deliver and report against the overarching strategic objective. For example, the Department did not define or set numerical targets in relation to the expansion of testing capacity, or in

relation to the average journey time for a citizen to a test site, however the Department did receive reports from the PHA on the timeliness of contact tracing as described above at paragraph 681 and in more detail in the section on "Tracing". I was of the view then, and remain so now, that the information and advice provided by the CSA to the PHA in terms of the capacity required was evidence based and clear of what was expected in relation to the anticipated demands on contact tracing in further waves of the pandemic.

706. In relation to PCR capacity, the underlying principle required that PCR capacity should be scaled as quickly as possible through Pillar 1 including the Academic Consortium and through the Pillar 2 programme until sufficient to meet need. In relation to accessibility and equity of access to test kits, the Department's underlying principle was that test kits were rapidly accessible to as much of the population as was possible and that results were reported back quickly – both to the individual to support isolation as required, and to the Department and the PHA to support ongoing epidemiological and surveillance assessment and policy options. As set out in the section on Testing , the Department worked with a range of stakeholders to deliver access to PCR and LFD tests for the entire population. Data and reporting was available on results from both LFD and PCR tests. Those using self-administered LFDs were encouraged to report results however this relied on voluntary reporting and as such there was not reliable data on the totality of tests used or their results.

Specific Targets

707. There were some discrete areas where targets were set across TTI. For example, as part of its contracting arrangements, UKHSA / DHSC established a suite of Key Performance Indicators (KPIs) for the Pillar 2 Lighthouse Laboratories - one of these was in relation to TATs for PCR processing. The responsibility for management and oversight of performance against KPIs was for UKHSA / DHSC as the contract holder, however performance data in relation to TATs – including in relation to Pillar 2 testing for care homes - was also monitored by the EAG-T and the PHA. There were some instances in periods of peak demand where TATs targets were not met by the Laboratory in NI. During these periods EAG-T and / or the PHA escalated matters with UKHSA / DHSC for action.

708. Further to the establishment of the PHA led Health Workers Testing Group to implement HCW testing, on 4 June 2021, I wrote to HSC Trust Chief Executives to request that HSC Trusts develop robust preparations and plans for a significant expansion of regular asymptomatic testing of patient-facing staff in all programmes of care [MMcB7/128 – INQ000377271]. In this correspondence, I set out an expectation that in due course the programme of regular asymptomatic testing should reach a minimum of 80% of patient facing staff. The purpose of this target was to highlight the importance and urgency of scale up of this testing.

Consistency of the Public Taking Tests and Reporting Results

709. As set out at paragraph 218, the Department considers that in overall terms, other than at the outset of the pandemic and in later periods of peak demand as described, the supply of and access to tests was generally adequate and tests were generally consistently available. There were no specific targets set in this regard by the Department. The number of LFD and PCR tests reported in the period between 1 January 2020 and 28 February 2022 are detailed in the chart titled "*Total Number of Tests (LFD and PCR): 1 January 2020 to 28 February 2022*" in the section on "Tracing". This demonstrates that there were clear spikes in the patterns of tests taken and results reported across NI. As described at paragraphs 188 to 190, the relationship between testing, result reporting and case numbers was a complex one. For example, as the availability of tests increased, more people were testing and as a result a higher proportion of cases in the community were detected. Further, when testing was freely available, public communication by the Department and the PHA regarding the importance of testing in periods of increased prevalence and highlighting the availability of tests likely contributed to higher rates of testing in these periods as the public sought to keep themselves and those who were vulnerable safe. As such, there are many linked underlying factors impacting when tests are taken and results reported. Further, as above at paragraph706, reporting of self-administered LFD testing was voluntary and as such it is not clear how consistently this was done.

Contact Tracing Targets and Assessing Effectiveness

710. For those with symptoms in the population, the Department's policy position was that they were advised to self-isolate immediately and to take a Covid-19 test as quickly as possible. This was in line with public health advice across the four UK nations. This policy advice was communicated continuously. This policy was aimed at the whole population level, there was no formal target associated with this policy or target level uptake. Throughout the pandemic, testing and engagement with the contact tracing service remained voluntary and was actively promoted and encouraged.

711. Index cases were asked to identify all individuals who met the definition of a close contact – there were no numerical targets around this, and the number reported varied during the pandemic depending on behaviours of individuals and adherence to recommended mitigations. The PHA captured and reported information on the average number of contacts reported per case in its weekly bulletin and will be best placed to provide any further analysis required.

712. Contact tracing is most effective when positive cases are contacted as early as possible, and no later than 24 hours after a test, and their close contacts as soon as possible after that. In practice, the PHA in keeping with their operational responsibility for contact tracing aimed to communicate with close contacts no later than 48 hours of notification to the contact tracing service, and the Contact Tracing Service reported its performance against these metrics. As described in the section on "Tracing", during periods of peak demand for contact tracing, it was not possible to meet these metrics. The Contact Tracing Service employed the use of escalation measures within its Operational Contingency Framework at these times to optimise performance and reported progress to the Department. Performance of the Contact Tracing Service was reported by the PHA as part of its weekly published reporting and was discussed regularly with the Department – for example at the TTP Oversight Board and in response to ad hoc requests by the Department. These performance reports were also discussed at meetings of the NI Executive. Further detail is set out in the Section on "Tracing".

713. The PHA may be best placed to assist the Inquiry further with regard to operational targets for Contact Tracing.

714. The effectiveness of the Contact Tracing Service was assessed against the metrics described at paragraphs 697 and 712 above. Beyond this, in the Department's view and in my professional opinion, it was not possible to assess the actual impact of TTP, including contact tracing systems, in isolation in terms of limiting transmission of the virus, due to the wide range of factors which influenced transmission at any point in time. The NI Modelling group, in line with other UK modellers, made assumptions about the effectiveness of TTI for scenario modelling purposes.

715. As described in the 4 UK CMO's Technical Report (page 227) [see MMcB7/021 – INQ000177534], a report to which I contributed, it is not always easy to be clear what contact tracing and self-isolation can and cannot achieve in different circumstances. The role and impact will vary depending on the pathogen and disease being managed; the stage of the pandemic response, prevalence and incidence; and wider pandemic control strategies. The report sets out further reflections on factors that can limit the effectiveness of testing, trace and isolate and I have not replicated these here (see Chapters 6 on Testing and 7 on Contact Tracing and Isolation).

716. As has been discussed in other sections of this Statement, such as paragraph 678, from an early stage in the pandemic the Department recognised that TTI was most effective when community transmission of the virus was relatively low and would be significantly less effective when community transmission was high. Further, limitations in testing capacity and supporting delivery structures were initially a major constraint which in turn impacted the effectiveness of contact tracing. However, following significant scale-up, delivery of TTI policy continued to be an important element of the Department's ongoing pandemic response. This also helped to maintain public confidence and supported a greater sense of urgency and control to inform choices and behaviours, for example through the use of LFD self-testing, in particular as society gradually reopened. There was also strong support from Ministers for the consistent delivery of effective TTI policy in keeping with the agreed TTP Strategy.

717. In overall terms, in the period 1 January 2020 to 28 February 2022 there were 8,251,105 Covid-19 test results reported (includes PCR and LFD), and the Contact Tracing Service successfully contacted almost 600,000 (599,947) positive cases in the period 26 May 2020 to 19 June 2022 and provided advice and information to almost 950,000 (936,642) close contacts. While it is theoretically possible to assess the impact of TTI based on key assumptions, this is not the same as the actual effect. In my professional view, there can be no doubt that in overall terms testing and contact tracing services played a critical role in the pandemic response however the effectiveness of that contribution was reduced when community transmission was at a high level. TTI contributed to reducing transmission and reliance on other non-pharmaceutical interventions (NPIs) and greatly assisted in protecting the public from the virus, including those that are most vulnerable, and in protecting health and social care services and to all those working across the Health and Social Care system.

Facing a Future Pandemic

Reviews and Lessons Learned

718. The following reviews and lessons learned have been identified by the Department relevant to the scope of Module 7 and are covered in more detail below:

i. Rapid Review of the Contact Tracing Service – October 2020;
ii. Public Health Agency Review Refresh Programme – December 2020;
iii. UK Chief Medical Officers' Technical report on the Covid-19 Pandemic in the UK; and
iv. Test, Trace, Isolate – Lessons Learned: Draft UK Nations' Report – November 2022.

Rapid Review of the Contact Tracing Service – October 2020

719. As described in the "Test, Trace and Protect" section of this statement, on 3 October 2020 I commissioned a Rapid Review of the contact tracing service and its delivery mode to reflect on the key issues influencing provision and to provide assurances on capacity. The focus was to support the ongoing and future delivery of the contact tracing service by looking at the elements that had worked well, 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 high-quality information systems. The Rapid Review [MMcB7/253 - INQ000137388] reported on the 12 October and made a number of key findings which were subsequently taken forward by the PHA, supported by the Department. Implementation of the findings of this work was taken forward through the appointment to the PHA of a Director with responsibility for the Covid-19 Contact Tracing Service in NI. The Director reported to the PHA CEO and updated the Department through participation as a core member of the Test Trace and Protect Oversight Board. The key recommendations of the report included the establishment of a Programme Board to provide oversight and strategic direction for the operation of the Contact Tracing Service, addressing workforce challenges (including the recruitment of a wider skill mix to support the professional staff already delivering the service), support for data

analytics and development of data platforms, and improved communications to maximise update of digital innovations to support contact tracing, including the new digital self-trace platform. Further detail is set out at the "Contact Tracing" section of this statement. In the Department's view, the programme of work taken forward by the PHA to address the Review's findings significantly contributed to development of the Contact Tracing Service.

720. Over the duration of the pandemic response the PHA, working with the Department and DfC under the auspices of the TTP Oversight Board, provided advice and support for people who tested positive and who were self-isolating, tracing some 600,000 cases and 950,000 contacts before the contact tracing service was paused in early 2022.

Public Health Agency Review Refresh Programme – December 2020

721. Recognising the very significant demands on the PHA and the likely longer-term nature of these, I proposed and agreed with the senior leadership team of the PHA an external organisational development review with a focus on capacity and capability. This was jointly commissioned by the Department and PHA to carry out a rapid, focused external review of the PHA's resource requirements to respond to the Covid-19 pandemic over the subsequent 18-24 months. The final report [MMcB7/254 - INQ000137389] was delivered to the PHA Chief Executive, PHA Chair and myself as CMO and head of PHA sponsor branch in December 2020. The Review contained four high level recommendations relevant to the scope of Module 7 of the Inquiry which, through their implementation, would constitute a major change programme leading to a new model for operational delivery of the role and functions of the PHA. The recommendations were to:

i. Strengthen the public health system in Northern Ireland;
ii. Strengthen health protection capability within the PHA;
iii. Develop science and intelligence capability; and
iv. Build a modern, effective and accountable organisation

722. A PHA Reshape Refresh Oversight Board was established to oversee the implementation of the recommendations, which I initially co-chaired with the CEO of the PHA before this transitioned to the Board of the PHA in December 2023 following completion of the first two phases of the programme. The implementation of these recommendations is being taken forward as an integral part of a wider exercise to reshape and refresh the PHA which also encompasses, in addition to its health protection functions, the PHA's responsibilities for health improvement and service development functions. Phase 3 of the programme is now led by the PHA and is planned to run for two years from January 2024. Further detail of this organisational development programme would be best provided by the PHA if of assistance to the Inquiry.

UK Chief Medical Officers' Technical report on the Covid-19 Pandemic in the UK

723. My UK CMO colleagues and I worked together to co-author a "Technical report on the Covid-19 Pandemic in the UK" published on 1 December 2022 [see MMcB7/021 - INQ000177534]. Policy officials and scientific professionals across the four nations, in particular the NI CSA, also contributed to the development phase of this report. While it is a matter for the Inquiry to ultimately establish the lessons learned, this report was written to share information and the learning from our experience of the pandemic with our successors as CMOs/ DCMOs who may need to respond to a future pandemic. The Technical Report includes chapters on Testing and on Contact Tracing and Isolation. The full detail of the relevant chapters is not replicated here; however, some of the final reflections offered included:

    i. Limitations in testing capacity and an end-to-end system to effectively use the outputs of testing were initially a major constraint. The magnitude and speed of scale-up required in the testing system for Covid-19 was unprecedented. The major efforts required to expand testing capacity highlighted the importance of building testing systems that maintain the capacity for an adequate contingency response, or at least retain expertise on how to surge scalable TTI in the event of a new variant or an entirely new pandemic. The diagnostics industry should be included in planning as they may be a key partner, for example, in providing rapid surge capacity. The benefits of this in NI were significant as

demonstrated through the work of the NI COVID-19 Scientific Academic Consortium, with academic, research and commercial partners working at pace to increase local Pillar 1 testing capacity as discussed at paragraph 245.

ii. The importance of aligning testing aims, use cases, technologies, data flows and communications in coherent testing strategies. An agreed plan for prioritising usage was and will also likely be required again – for example, targeted at high-risk settings (staff and patients in hospital and in care homes) and for outbreak management.

iii. Communication of the rationale and practical requirements of testing strategies and changes to testing policy will continue to be important, whether with the public or professionals. Approaches to communication should take account of the complexity of messaging and should, from the outset, make best use of, for example, trusted community leaders to assist.

iv. The use of pilots was helpful in understanding how new strategies or policies might operate and how people might respond to them.

v. Testing was deployed for a wide range of use cases in this pandemic, some of which may be required in future pandemics. Some of these were new at the scale seen during the pandemic, such as repeated testing using self-read and self-reported testing, and improved people's ability to manage their own risks and the risks for those they were meeting, as well as supporting surveillance at scale.

vi. Testing innovations came at speed and required a rapid, independent quality assurance and validation process. Quality in the market was very variable and the regulatory approach globally was variable.

vii. Pre-symptomatic and asymptomatic transmission, in the absence of routine mass asymptomatic testing, are a huge challenge for even a highly effective contact tracing system and can make short turnaround times a challenge.

viii. If contact tracing at this scale is needed again, operational planning and experience on scaling up across the 4 nations will be helpful.

ix. Large-scale contact tracing should, wherever possible, build on existing systems and expertise. This was the case in NI with contact tracing embedded in the PHA and built on existing expertise.

x. The development and deployment of digital innovations to complement traditional person-led contact tracing were important to support delivery of contact tracing at scale. Preparedness plans for future pandemics should include the need for large-scale digital platforms.

724. The health equity dimension to contact tracing is important but was not always fully addressed. Some people were not closely engaged with formal information sources and were disengaged from systems delivering elements of the pandemic response. Long-term engagement with all communities is important in reducing the risk that people become disengaged or misinformed. In my view, more effective use of behavioural science (as described at paragraph 726 below) is required, to more effectively modify behavioural responses and provide greater support to address the barriers to adherence to TTI.

725. In my previous personal statement in Inquiry Module 2C, I reflected on some of the themes set out in the 4 CMOs Technical report on the Covid-19 Pandemic in the UK (see paras 230 to 249), [see MMcB7/021 - INQ000177534], and offered further reflection and learning in the NI context, which I have summarised in this statement although not repeated in detail here. The issues explored include:

i. The critical need to build future scalable capability and capacity across government to identify and respond to future risks and test the resilience of that capability and capacity on an ongoing basis.

ii. Conducting research at pace to answer key questions and address gaps in the evidence was essential. Once generated, agility and flexibility are necessary to ensure the rapid dissemination of the emerging evidence and knowledge,

reflecting that into dynamic policy approaches and implementation. The most important advance was, of course, the development of highly effective and safe vaccines. It took just 326 days from the genomic sequence of Covid-19 being identified to the authorisation of a Covid-19 vaccine. While there can be no guarantee that vaccines are developed in future pandemics as rapidly, it is important that this was only possible by the research and investment into candidate vaccines against SARS and MERS some years previously. The research capability in the UK was key to providing answers to important questions and undoubtedly had a major role in turning the response to the pandemic from a broad-based societal approach, with very significant implications for the public based around NPIs, to a more focused one with the development of medical countermeasures such as vaccines, drug treatments and improvements in clinical management. The important role of research in the pandemic is covered more fully in the UK CMO Technical report, Chapter 3, pages 107 to 119 [see MMcB7/021 - INQ000177534]. Invariably science will be our path out of any future pandemic, and it is essential that we continue to invest in research and science so that we are better equipped the next time.

iii. Public trust was essential in the Covid-19 pandemic response. Trust is hard to maintain during a crisis and easy to lose, especially with no end in sight prior to the development of vaccines. Spending time interacting with civic society, with businesses, with the Churches and Faith Leaders, with Communities and wider society was important in building understanding and confidence in specific areas such as modelling, and an understanding of the science and the necessity for NPIs, which, while undoubtedly saving many lives, also had such a negative impact on people's lives and livelihoods. Sharing of information and being open and transparent was important to help maintain and build that trust. The Department's Covid-19 Dashboard was a good example of this.

iv. Joint working with Ministers across the UK and the RoI to provide a coordinated approach to the response to Covid-19 and in making progress on shared challenges and approaches such as international travel was important. At a UK level, joint working included collaboration on the Covid-19 Vaccination Programme, the National Testing Programme, the many groups on supporting

policy decisions on international travel, and work on the International Travel Regulations. This included Covid-O (operational) Committee meetings, with Ministers from all UK administrations participating, and the Joint Biosecurity Centre (now part of UKHSA) which worked closely with the Department and the PHA. Agility and partnership working across the health delivery sector and beyond – for example with academia, research and commercial industry partners – was also necessary and was an important strength.

v. The pandemic required a sustained intense effort to address matters of significant complexity over a prolonged period. The policy dimensions and approaches required were complicated and, given the evolving evidence and the changing course of the pandemic, these required to be continually reviewed and updated. The impact on the Department, as a relatively small department, was significant - the challenges in securing additional staff compounded this and the inability to rotate individuals in key posts presented risks during the peak periods of the pandemic response. The same was undoubtedly the case in other departments and ALBs. Future planning and preparedness will need to fundamentally consider the human resourcing aspects if we are to maintain such a sustained response and if this is not to become a critical failure point.

726. I would offer the following additional lessons learnt:

i. Baseline capacity - there is an important need to retain a level of baseline diagnostic testing and contact tracing capacity supported by flexible and agile contingency arrangements to support a scale-up in operations should that be required in the future. Contingency plans should be tested regularly, including arrangements for supporting infrastructure – for example, including data collection, data shared, digital technology, information systems and analytics and workforce.

ii. It is the Department's view and mine, that in general in the context of the scale of the challenge, throughout the course of the pandemic the TTI system was effective. Strategic policy intent was clear, and advice was provided to the PHA by the CSA to assist in their operational planning of the service as addressed in the "Tracing" section in this statement. There were challenges in the PHA's initial capacity to

implement at the unprecedented scale required given capacity constraints in TTI in addition to the significant other demands. The PHA will be best placed to advise on those operational challenges.

iii. The Department is currently working to identify key improvements to strengthen our capabilities across the wider Health and Social Care system including within the PHA. This includes the development of HSC Operational Plans and the ability to scale up staffing and equipment necessary to address and mitigate the spread of a disease. The operational legacy of the enhancement in the TTI systems remains within the PHA and is also being progressed under the PHA-led Reshape Refresh programme. The Department-led Pandemic Resilience Planning is progressing within the wider HSC and work is underway to consider the modelling for a future pandemic in relation to TTI to further assess the resource requirements including capacity, digital needs and the approach to testing specific groups and the general public. The experiences of TTI during the Covid-19 pandemic are central to this work and in ensuring the learning is reflected in the development of scalable TTI capacity and capability as part of our future pandemic resilience planning.

iv. Collaboration and Support – given the demands of the pandemic the Department, by necessity, operated across functional organisational boundaries, both with the Health and Social Care sector and in the wider NI Executive. Whilst this was beneficial, it created a huge challenge in terms of rapidly scaling up and maintaining new relationships, networks and communications channels. This model of matrix working will undoubtedly be required in any future pandemic response to make most effective use of experience, expertise and system wide capabilities and capacity.

v. Use of Innovative Technology & Development - several critical operational challenges required rapid development and deployment of technological solutions. It was a significant challenge to develop and deploy at scale the range of new technological interventions during the pandemic, with the need to quickly skill-up and redeploy staff to meet new and emerging needs. Examples of relevance to Module 7 of the Inquiry include the Covid-19 proximity App and the digital self-trace platform.

vi. Care Homes - the Covid-19 pandemic raised significant challenges for care homes. The protection of care home residents, their families, friends, and staff was a key priority for the Department throughout the course of the pandemic. Building on existing relationships, a collaborative multi-agency working partnership between the Department, the PHA, HSC Trusts, the NI Ambulance Service (NIAS), the Regulation and Quality Improvement Authority (RQIA), and the care homes themselves and their representative bodies, including organisations advocating for older people, ensured a sustained focus on actions required to effectively support and reduce the impact of Covid-19 on care homes. This included, for example, the prioritisation of testing for care homes and the implementation of a regular programme of asymptomatic testing supported by the PHA and HSC Trusts. Further details on the approach taken with partners in the Care Home sector are set out in the section on "Testing" in this statement. Building on existing networks to enhance such joint working to make care homes more resilient with respect to IPC and the provision of "in reach" clinical care will be an important feature in future pandemics.

vii. Behavioural science to inform communication and behavioural modification - the ability of the test, trace, and isolate system to keep rates of infection under control depends on how well people adhere to guidance on testing, provide details of their contacts, and self-isolate. This, in turn, depends on people's knowledge, motivation, and the opportunity to do so. From the time when an infected person develops symptoms to the time their contacts come out of self-isolation, adherence might break down at multiple stages. Evidence suggests that financial considerations, caring responsibilities, and poor accommodation were factors that affected whether people followed TTI advice to remain at home, with some evidence suggesting that men and younger age groups were less adherent to Covid-19 restrictions. Better financial and practical support might improve rates of adherence to test, trace and isolate behaviours. As findings in the CORSAIR study showed, associations with financial hardship, index of multiple deprivation, lower socioeconomic status, and having a dependent child in the household indicated correlations with lower adherence to full self-isolation, not requesting a test, and poorer symptom recognition. The disproportionate impact of the pandemic on people from lower socioeconomic backgrounds and with carer responsibilities has been well documented. Behaviour reflects opportunities and capabilities as well as motivation,

and people need help to achieve their intentions. While intentions to engage in test, trace, and isolate behaviours are high, a greater focus on financial and practical support is likely to enable more people to translate their intentions into behaviour. Males and younger people were less likely to engage with testing, self-isolate, and to intend to provide details of close contacts. Working in a key sector was also associated with not fully self-isolating. This might be because key workers have a greater financial need to work, feel a greater social pressure to attend work, or are less likely to be able to work from home. Key workers and people from minority ethnic backgrounds were less likely to identify common symptoms of Covid-19. Increased capacity in Behavioural Science within the PHA is essential to ensure engagement, and more tailored communications to effectively modify behavioural response through improved understanding, knowledge and adherence within specific groups. Such an approach is likely to improve adherence with TTI and increase its effectiveness and should be factored into future planning for scalable TTI capability.

Test, Trace, Isolate – Lessons Learned: Draft UK Nations' Report – November 2022

727. In June 2022, the UK Government & Devolved Administration Board (UKG-DA - which was established under the governance structure of the NTP to support joint working at senior officials' level across the UK nations) commissioned the Scottish Government to lead on a four nations test, trace and isolate lessons learnt exercise. Policy officials from the Department's Covid-19 Response Directorate contributed, with input from PHA colleagues, to this exercise. A draft report was developed and refined in November 2022 which has been exhibited for the Inquiry [MMcB7/255 – **INQ000103006**]. The Inquiry is asked to note that the report was not finalised and, as such, the draft findings and conclusions outlined do not represent a final and fully considered Departmental position. The report was not discussed or approved through internal departmental governance structures, for example the TTP Oversight Board. The draft report is shared with the Inquiry in that context and includes some valuable learning which may assist the Inquiry.

728. The Department has reflected and made comment throughout the statement on strategy and planning, decision-making and policies, and roll-out and implementation

in relation the TTP Programme and has no further detail to add in that regard at this section of the statement.

Reflections

729. During the Covid-19 pandemic the world experienced extensive and tragic loss of life and many have experienced profound impacts on health and well-being and continue to do so. Unarguably, there have also been substantial societal and economic consequences globally, and these are also reflected in the impacts in NI.

730. Thanks to the collective efforts of society, medicine and science, while the personal costs and impact remain, the threat posed by Covid-19 is less. The legacy from this pandemic must be to ensure that we are as prepared as we can be for the next pandemic, and that we learn from all the lessons from the experience of the Covid-19 pandemic.

731. I want to pay tribute to the public of NI for their action and response to protect their fellow citizens which undoubtedly saved many lives during the greatest major public health challenge in a generation. Had they not done so, the challenges for our health service and our public health teams would have been significantly worse. To all of those in health and social care, in public health and academia as they responded to wave after wave, we owe you a debt of gratitude.

Statement of Truth

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

Signed: Personal Data

Dated: 07 April 2025