Witness Name: Ben Dyson

Statement No: 2

Exhibits: BD2/1-BD2/324

Dated: 04 April 2025

UK COVID-19 INQUIRY

SECOND WITNESS STATEMENT OF BEN DYSON

I, Ben Dyson, of the Department of Health and Social Care, 39 Victoria Street, London SW1H 0EU, will say as follows:

INTRODUCTION

1. I make this statement in response to a request from the UK COVID-19 Public Inquiry (the Inquiry) dated 29 August 2024 made under Rule 9 of the Inquiry Rules 2006 (the Request) asking for a corporate statement on behalf of the Department of Health and Social Care (the Department/DHSC) providing an overview of the structure of the Department and the role it played in Module 7 (test, trace and isolate) during the COVID-19 pandemic between 1 January 2020 and 28 June 2022. This statement covers the Department's role in testing. It is submitted alongside 3 other corporate statements listed in paragraph 4.

2. As this is a corporate statement on behalf of the Department, it necessarily covers matters that are not within my personal knowledge or recollection. This statement is to the best of my knowledge and belief accurate and complete at the time of signing, in line with responding, as far as possible, within the Inquiry's deadlines. Notwithstanding this, it is the case that the Department continues to prepare for its involvement in the Inquiry. As part of these preparations, it is possible that additional material will be discovered. In this eventuality the additional material will of course be provided to the Inquiry, and a supplementary statement will be made if need be.

3. This statement is submitted to the Inquiry alongside a further 3 corporate statements, which together provide the Department's corporate response to the Inquiry on Module 7. The 4 statements are as follows:

    a. Statement A provides key context on structures, roles and key decision-makers during the relevant period.

    b. This statement (Statement B) provides a more comprehensive overview of the Department's role in COVID-19 testing during the pandemic.

    c. Statement C explains the Department's role during the pandemic in contact tracing, policy on self-isolation of people with COVID symptoms and people with positive test results and their contacts, policy on tiering regulations, and border measures used as part of the government's response to COVID-19.

    d. Statement D provides an overview of some of the equality considerations and describes the relevant communications campaigns to raise awareness and/or encourage compliance and engagement with policy. It also covers lessons learned.

4. For areas outside of my responsibility, I have relied on departmental records and briefings, and my understanding of the overall approach to the pandemic.

5. To describe the Department's role in testing in a coherent way, the statement has been structured into 5 sections. These sections are summarised here:

    a. **Section 1** covers the importance of testing in responding to pandemics, testing prior to the COVID-19 pandemic, the development of the first COVID-19 diagnostic test and the Department's early response.

    b. **Section 2** covers the Department's increasing involvement between March 2020 and May 2020 in scaling up testing capacity, prioritising testing and improving quality and speed of testing, including the development of the Testing Strategy and its 5 pillars.

    c. **Section 3** covers the establishment of NHS Test and Trace (NHS T&T), including the further expansion of the testing programme.

    d. **Section 4** covers the expansion and prioritisation of the Testing Strategy during the second and third waves of the pandemic including the expansion of

asymptomatic testing using lateral flow devices (LFDs), the 2020-21 COVID Winter Plan, the Community Testing Programme, the universal testing offer announced on 9 April 2021, accreditation of private testing providers, the Omicron variant first detected in the UK in November 2021, and the Living with COVID-19 plan published on 21 February 2022.

e. **Section 5** provides further information about testing in the adult social care and education sectors.

f. **Section 6** deals with costs, data-sharing and modelling, international comparisons, and the EU Early Warning and Response System.

SECTION 1: CONTEXT FOR DEVELOPMENT OF COVID-19 TESTING

6. This section provides contextual information on the role of testing, the different ways testing can be used, and a broad clinical overview of the development of the first COVID-19 diagnostic test and how testing developed from that point. It provides background that helps explain the reasoning behind later decision-making.

7. This section also sets out how, during the COVID-19 pandemic, testing was used alongside other measures to help support the progressive easing of social distancing measures.

8. This section of the statement also provides a clinical overview of the SARS-CoV-2 virus that causes COVID-19 and was responsible for the pandemic and explains how the virus was detected and how testing for it developed.

Importance of Testing

9. Testing is a crucial element of the public health response to any disease. The importance of testing in the government's response to the pandemic is demonstrated by the significant evidence the Department has provided in its Module 2 statements, which this section will draw upon.

10. In any pandemic, testing is likely to serve multiple important functions including:

a. enabling accurate clinical diagnoses so that people receive appropriate treatment

b. identifying people with a transmissible infection so that they, and any close contacts, can self-isolate (or continue self-isolating if already doing so by virtue of having relevant symptoms) to prevent spread to others

c. enabling people who have symptoms or who live in a household where other people have symptoms to stop self-isolating if they test negative to prevent disproportionate social and economic burdens

d. providing additional protections for people in high-risk settings such as hospitals, care homes and prisons, including testing people who are not showing symptoms

e. helping manage local outbreaks

f. supporting surveillance, supporting research into symptoms and patterns of transmission, and providing learning about pathogens

11. Testing for infectious diseases is particularly important where an infection has non-specific symptoms or can be asymptomatic, both of which were the case for SARS-CoV-2.

Testing for Pathogens Prior to the Pandemic

12. A pathogen is any organism that causes disease: viruses, bacteria, fungi, and parasites are all examples of pathogens. Testing for pathogens is central to supporting decision making on clinical care for patients; tests should be easy to use and provide a rapid result to have a positive impact on care.

Responsibility for Testing and Surveillance

13. Prior to the COVID-19 pandemic, the Department was not regularly involved in the testing of individuals for pathogens. The Department's role in testing was mainly limited to its oversight of Public Health England (PHE). For more information on pre-pandemic testing capacity and planning, as well as plans for scaling up capacity, contact tracing personnel and technology, the Department refers the Inquiry to the UK Health Security Agency (UKHSA). In certain cases, such as the 2014 Ebola outbreak, the Department worked

with PHE and the Prime Minister's Implementation Unit (PMIU) on policy regarding the screening of arrivals from affected countries into the UK **(BD2/1 - INQ000022723)**.

14. Before the pandemic, overall testing and health surveillance activities were the responsibility of the Health Protection Agency (HPA), which became PHE on 1 April 2013. PHE, the arm's length body (ALB) responsible for decision making on public health matters (described in more detail in terms of its role in testing in Statement A of the Department's corporate response to Module 7), brought together a range of functions and responsibilities previously delivered through several other organisations, including all functions of HPA **(BD2/2 - INQ000562713)**.

15. As described in paragraphs 256 to 260 of Sir Christopher Wormald's First Witness Statement dated 25 November 2022 **(BD2/ 3 - INQ000184643)**, PHE's domestic surveillance activities included active data collection and analysis through local public health laboratories based in the East of England, London, the North East, the North West, the South East, the South West, the Midlands, and Yorkshire and the Humber **(BD2/4 - INQ000023124)**.

16. Further details, including the numbers and skills of the staff who were involved in these capabilities, are likely to be available from NHS England (NHSE) and UKHSA (which is now responsible for the health protection functions previously held by PHE). The Department does not hold this data.

17. PHE also issued guidance for managing, testing for and investigating various types of infections. For example, prior to the pandemic, PHE had published guidance on the investigation of zoonotic diseases (infections that are transmissible from vertebrate animals to humans) and how to conduct surveillance of laboratory-confirmed infections **(BD2/5 - INQ000562595; BD2/6 - INQ000534088).**

Pre-pandemic Testing Capacity

18. Testing has always been crucial in supporting decision making on clinical care for patients and in protecting vulnerable people in high-risk settings such as hospitals and care homes. Individuals in these settings are at a higher risk of poorer outcomes from pathogens because of age, comorbidities and other risk factors. Section 4 of this statement sets out the use of asymptomatic COVID-19 testing (which involves testing of individuals who, while not presenting with symptoms, may still be infected and capable of spreading the virus) for patients, staff and visitors prior to entering high risk settings such as these.

19. Paragraph 16d of Sir Christopher Wormald's Twelfth Witness Statement for Module 3, dated 24 April 2024 **(BD2/7 - INQ000473872)**, stated that:

> *"In relation to diagnostic testing, in 2019 across the NHS and Public Health England (PHE) laboratories there was a low level of diagnostic testing capacity (at around 1,000 tests per day)".*

20. PHE's Colindale Laboratory was one of the national specialist and reference microbiology laboratories for England. A reference laboratory performs or contributes to surveillance activities or has established channels of communication with the national surveillance body to regularly report incidence data and provide an 'alert function' for unusual occurrences.

21. The capabilities of the Colindale Laboratory Respiratory Virus Unit included a pan-coronavirus assay (a laboratory test to find and measure the amount of a specific substance) that could broadly identify a generic coronavirus. This had previously been used, for example, to test for severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS), helping to manage the response to these pathogens **(BD2/8 - INQ000527863)**.

22. Different laboratories and services existed for different pathogens and tests, with certain laboratories specialising in certain diseases or scientific procedures **(BD2/4 - INQ000023124)**.

The Department's Early Response

23. As set out above, at the point in early January 2020 when a novel coronavirus was announced in China, the Department's role in testing was mainly limited to its role as sponsoring body of PHE. However, the pace at which the public health response needed to respond to the growing public health threat meant that the Department's role evolved quickly in the first few months of 2020.

24. During the early stages of the pandemic, the ability to identify infected individuals depended heavily on testing and was vital to the ability to trace close contacts of infected individuals and the effective implementation of quarantine restrictions to contain the spread of the virus. Testing also had a critical role in surveillance, helping to track transmission and rates of transmission from the first identified cases, and supporting the treatment of infected individuals. However, as set out in paragraph 221 of Sir Christopher

Wormald's Third Witness Statement to the Inquiry for Module 2 dated 29 March 2023, at the start of January 2020, the UK had neither a test for COVID-19 nor the infrastructure to scale up diagnostic capacity quickly.

25. Prior to the development of a diagnostic test at the end of January 2020, in cases where there was suspicion of infection, testing for COVID-19 was done indirectly by testing for alternative causes of illness and using generic all-coronavirus tests. The UK's Colindale laboratory, as discussed earlier in this section, was in possession of a 'pan-coronavirus' assay prior to the identification of the SARS-CoV-2 virus. This assay may have been able to identify the common cold and other similar viruses; however, it was uncertain whether it would be able to accurately identify SARS-CoV-2. Assays may produce false positives/negatives, and the performance of this assay against the novel coronavirus could not be validated until the genetic sequencing of the virus was known.

Identifying the COVID-19 Virus

26. COVID-19 is caused by a virus entering the human body. A virus is an infectious microbe consisting of a segment of nucleic acid (either deoxyribonucleic acid – DNA – or ribonucleic acid – RNA). The SARS-CoV-2 virus is an RNA virus, which is a virus that has a single as well as double-stranded RNA as its genetic material. Notable diseases caused by the RNA viruses include SARS, influenza, the common cold, HIV and hepatitis B and C.

27. Viruses are biologically diverse and can adapt rapidly, which makes transmission difficult to anticipate and manage. The risks of humans being exposed to pathogens such as viruses that can develop into global pandemics has increased with the expansion of human populations into natural ecosystems. This leads to greater exposure of those populations to zoonotic viruses. Current understanding is that this was the case with COVID-19.

28. The development of COVID-19 tests was a world-wide major public health priority from the start of the pandemic. On 10 January 2020, scientists from China published the first genetic sequencing of SARS-CoV-2 via virological.org, a forum launched in November 2014 by British biologist Andrew Rambault, designed to assist with public health activities and research. The data published on this forum enabled researchers from around the world to build molecular tests for the virus.

Development of COVID-19 Diagnostic Testing

29. Genetic sequencing of the virus enabled research to begin quickly on testing for COVID-19. During the pandemic, 3 types of COVID-19 tests were used. These were the reverse transcription polymerase chain reaction (RT-PCR) tests (more commonly referred to as PCR tests), the rapid antigen or lateral flow device (LFD) tests, and antibody blood tests. Section 2 of this statement describes the early development of PCR diagnostic tests, with other testing capabilities described later in the statement.

30. With the first reported publication of the genome sequence of the novel coronavirus, PHE began work to rapidly develop PCR tests with the World Health Organization (WHO) and a global network of laboratories. Researchers from the German Centre for Infection Research (DZIF) published a press release on 16 January 2020 stating that the team at the Charité – Universitätsmedizin Berlin (Europe's largest university hospital) had developed a new laboratory assay to detect the novel Chinese coronavirus **(BD2/9 - INQ000546861)**. WHO published the assay protocol as a guideline for diagnostic detection. UKHSA should be able to assist further on the sharing of data in relation to diagnostic testing.

31. UKHSA (which has inherited PHE functions) will be able to provide the specific details of the organisations with which PHE worked and with which they shared information.

32. A submission sent to the Secretary of State on 21 January 2020 notified ministers that PHE's Colindale Laboratory had developed a prototype laboratory test specific for SARS-CoV-2 **(BD2/10 - INQ000527868; (BD/11- INQ000106897).** . The Department and PHE announced the development of the test on 22 January 2020 **(BD2/12 - INQ000106048)**.

33. On 24 January 2020, the Chief Medical Officer (CMO) updated Cabinet Office Briefing Room (COBR), the government's committee that convenes for major incidents), that a test had been developed, that it was at that point being validated and that testing capacity was at 100 persons a day **(BD2/13 - INQ000056214)**.

34. A Scientific Advisory Group for Emergencies (SAGE) meeting held on 28 January 2020 confirmed that a test specific for SARS-CoV-2 would be ready by the end of that week, with initial testing capacity running at 400-500 tests per day. However, it was pointed out that the accuracy of the test was still unclear. Testing of asymptomatic individuals was not recommended at that point **(BD2/14 - INQ000057492)**. These SAGE meetings were

attended by the CMO Professor Chris Whitty and the Deputy CMO Professor Jonathan Van-Tam.

35. The RT-PCR assays used for the UK's COVID-19 testing programme were verified by PHE and showed over 95% sensitivity and specificity. This means that under laboratory conditions, these RT-PCR tests should never show more than 5% false positives (a positive result for a person not infected with COVID-19) or 5% false negatives (a negative result for a person infected with COVID-19).

36. Laboratory testing verifies the analytical sensitivity and analytical specificity of the RT-PCR tests in an ideal testing environment. In a clinical or community setting there may be inefficient sampling, lab contamination, sample degradation or other sources of error that may lead to increased numbers of false positives or false negatives. The diagnostic sensitivity and diagnostic specificity of a test depends, therefore, on operational conditions.

SECTION 2: MEETING TESTING DEMAND

37. As set out in Section 1 of this statement, the UK responded rapidly to the publication of the genetic sequencing of COVID-19, developing a test to diagnose infection by the end of January 2020. However, by the end of January, demand for tests for COVID-19 had exceeded the limited testing capacity available at that time. This section describes the work the Department undertook, working closely with others across government, to improve the efficacy of testing, to develop an unprecedented scale of testing capability, and to determine how testing should be deployed most effectively as part of the wider government response to COVID-19.

38. While Sections 3 and 4 of this statement describe policy development and decision making after the creation of NHS T&T in May 2020, this section focuses on the main challenges faced from the initial development of a test, through the period of rapid capacity building between February and May 2020.

Early Pandemic Testing

39. At the start of the pandemic, the UK pursued a strategy that aimed to contain the virus by testing suspected cases and, if they tested positive, ensuring that they and any recent close contacts isolated to prevent onward transmission. The purpose of the 'Contain' phase is described in more detail in paragraph 126 of Statement A in Module 7.

40. Throughout this period, PHE undertook testing and contact tracing for COVID-19, with oversight from the Department as its sponsor. PHE reported into the Department through the Operational Response Centre (ORC) and the DHSC Strategic Incident Director.

41. As outlined in paragraph 21 of the Witness Statement of Matthew Style, Jonathan Marron and Professor Lucy Chappell, dated 22 December 2023, **(BD2/15 - INQ000389241)** PHE (and its successor UKHSA) and the National Institute for Health and Care Excellence (NICE) produced and published guidance from 10 January 2020 onwards on the investigation and initial clinical management of COVID-19, as well as information and advice for health professionals on the assessment and management of suspected UK cases of COVID-19 **(BD2/16 - INQ000339109; BD2/17 - INQ000339111; BD2/18 - INQ000074966; BD2/19 - INQ000339112; BD2/20 - INQ000339108; BD2/21 - INQ000339107; BD2/22 - INQ000339105; BD2/23 - INQ000339106; BD2/24 - INQ000339102)**.

The Challenge of Increasing Capacity

42. One of the first challenges was to expand diagnostic capacity, which, as already set out, was limited at the start of the pandemic. As set out in chapter 6 of the 'Technical Report on the Covid-19 pandemic in the UK' **(BD2/25 - INQ000203933)**, the diagnostic testing capacity that did exist used multiple small laboratories with multiple platforms and space constraints. The laboratories had an expert workforce that was difficult to expand quickly. Testing capacity was also impacted by increased global demand for testing supplies (particularly swabs and reagents) and reduced production in spring 2020 as COVID-19 spread more widely.

43. Another early challenge was the nature of the early PCR testing developed by PHE. This form of testing involved a laboratory method that used a RT-PCR assay based on oral swabs to make many copies of a specific genetic sequence for analysis. This test can detect the presence of any type of coronavirus, including specifically identifying SARS-CoV-2 **(BD2/26 - INQ000546860)**. Developing this test was complex and depended on:

a. knowledge of the exact viral sequence and viral diversity in the target area

b. an ability to source key reagents (primers and probes)

c. an ability to source appropriate clinical material for assay validation purposes (establishing analytical sensitivity and specificity)

d. an ability to source control material (known template)

e. an ability to deploy the new test against relevant clinical material acquired from cases of new virus infection (which might be difficult to acquire)

44. PCR tests require the amplification of genetic material so that even a small amount of coronavirus can be detected. This makes it a highly sensitive test, i.e. one where there is a very high probability of an individual with a positive test result being truly positive, with an accuracy that approaches 100%. It remains the gold standard for diagnosing SARS-CoV-2 **(BD/27- INQ000496294).**

45. A key early challenge was that conducting PCR tests requires a skilled laboratory technician and specialised equipment. Between sample collection, transportation, amplification, detection and reporting, it can take from 12 hours to 5 days to obtain results. As testing capability developed, antigen tests, which facilitate more rapid results and are also used for other viral illnesses such as influenza, were also developed. Antigen tests (which were trialled during 2020 but not used in the national testing programme until late 2020), are described later in this statement in paragraphs 201 to 218.

46. Both the availability and the speed of testing were important for several reasons, including supporting clinical diagnosis and treatment and enabling the swift tracing of contacts. Statement C of Module 7 provides further details of the link between rapid testing and effective contact tracing.

47. On 27 January 2020, PHE updated the Department on the development of its rollout plan for UK regional laboratory testing provision **(BD2/28 - INQ000562598)**.

48. On 7 February 2020, PHE announced that diagnostic capacity for testing would increase from one laboratory in London to 12 laboratory sites across the country from 10 February 2020 **(BD2/29 - INQ000562599)**.

49. By 16 February 2020, capacity reached 2,000 tests per day, with a 24-hour turnaround **(BD2/30 - INQ000527886)**. PHE's Virology Cell was working with further laboratories across England to increase capacity **(BD2/31 - INQ000562600**.

50. On 13 February 2020, the UK Advisory Committee on Dangerous Pathogens (ACDP) discussed a paper presented by the Health and Safety Executive (HSE) and provisionally endorsed an HSE classification of SARS-CoV-2 as a Hazard Group 3 (HG3) pathogen (**BD2/32 - INQ000527983; BD2/33 - INQ000527881)**. This meant that COVID-19 testing could only be conducted in CL3 laboratories.

51. CL3 (also known as CAT 3) laboratories require qualified staff with the expertise to follow rigorous processes and procedures to handle test samples **(BD2/34 - INQ000562604)**. Limits on staffing availability resulted in significant barriers to meeting testing demand.

52. Recognising that greater laboratory capacity beyond its own CL3 networks would be required, PHE made a formal request to ACDP on 28 February 2020 for testing to be carried out at a lower level of containment, provided certain conditions could be met **(BD/35- INQ000119500).** . On 1 March 2020, ACDP and HSE agreed a new approach, whereby certain activities could be undertaken within a laboratory at containment level 2 (CL2), provided appropriate controls were in place **(BD2/36 - INQ000546868)**.

53. Following this agreement, from 1 March 2020, testing specimens were taken via swab (see paragraph 62 for an explanation of swab testing) at community centres, i.e. public spaces where local residents gather for various activities, social support and community engagement (some of which are run by local authorities while others are managed by local volunteer groups or committees), and by emergency departments and ambulance teams. These testing specimens were then transported to designated laboratories using safe and appropriate containers. Upon receipt of these samples, the laboratories would use scientific methods to determine whether the virus was detected within that sample. Negative results would then be released via the laboratory information system back to the requesting clinician, whereas positive results were reported by phone to the requesting clinician, the relevant PHE health protection team and the PHE Incident Director to manage **(BD2/37 - INQ000562603; BD2/34 - INQ000562604)**.

Scale of Demand

54. Despite these advances, March 2020 was also the month in which the spread and impact of the virus in the UK began to increase exponentially. The total number of positive cases

grew rapidly over the course of the month **(BD2/ 38 - INQ000527895; BD2/ 39 - INQ000527896)**, exceeding around 25,000 cases by the end of the month with around 1,700 deaths among those hospitalised **(BD2/40 - INQ000546880)**. This rapid increase in transmission increased demand for testing capacity **(BD2/ 41 - INQ000527917)**. Modelling of the disease is discussed below in Section 5.

55. On 11 March 2020, the PHE Incident Director wrote to NHS trusts to inform them of the establishment of the COVID-19 Hospitalisation in England Surveillance System (CHESS) **(BD2/ 42 - INQ000562605)**. The CHESS system was adapted from the UK Severe Influenza Surveillance System (USISS). Following discussion with NHSE and the CMO, the reporting frequency was increased from weekly to daily in view of the escalating COVID-19 situation.

56. CHESS collected epidemiological data (demographics, risk factors, clinical information on severity, and outcome) on COVID-19 infection in persons requiring hospitalisation and treatment in intensive care units (ICUs) or high dependency units (HDUs). This helped to monitor the impact of severe COVID-19 infection on the population and health services and to provide real-time data to forecast and estimate disease burden and health service utilisation. For further information on CHESS, the Department refers the Inquiry to UKHSA **(BD2/42 - INQ000562605)**.

Scale Up of Testing Capacity and Capability

57. From the limited capacity at the start of February 2020, there was a significant increase in testing capacity by the start of March 2020. As of 1 March 2020, a total of 11,750 people had been tested, with 11,715 negative results and 35 positive results **(BD2/39 - INQ000527896; BD2/38 - INQ000527895)**.

58. By 7 March 2020, testing was being carried out by 8 PHE laboratories in England – Colindale (in London), Cambridge, Leeds, Bristol, Birmingham, Manchester, Newcastle, and Southampton **(BD2/ 43 - INQ000527897)**. While testing demand had not yet exceeded capacity, some individual laboratories, for example Colindale (serving London) and Bristol, were reporting that they were close to reaching capacity. Pressure was mounting to scale up testing capacity.

59. On 7 March 2020, PHE advised the Secretary of State of its plans to boost capacity and speed of obtaining results.

60. On 8 March 2020, Departmental ministers received a briefing from PHE outlining its plans to scale up capacity over the coming weeks. PHE was working with the NHS in England to roll out PCR testing to a further 9 NHS laboratories, namely Barts Health, St George's, Health Services Laboratory (HSL), Guy's and St Thomas', King's, Oxford, Leicester, Sheffield, and Liverpool. This would increase capacity to 3,600 tests per day and ease pressure on laboratory capacity in London **(BD/43 - INQ000119745).**

61. On 10 March 2020, NHSE shared 'Guidance and Standard Operating Procedure Covid-19 Virus Testing in NHS Laboratories' with NHS pathology networks **(BD2/ 44 - INQ000119592).** This was critical in enabling laboratory capacity to expand as it allowed for swab testing within NHS laboratories. Swab testing is a type of testing used by the NHS, universities and commercial laboratories that uses a swab to collect a sample from cells in the body (e.g. from the throat, inside cheek or nose).

62. At the same time, PHE was engaging with commercial partners and academic laboratories both to use technological advances to increase capacity and turnaround times for processing samples sent for testing, and to assess the effectiveness of commercial tests. PHE's reference laboratories at Colindale were starting to conduct independent technical validations of commercial tests **(BD2/45 - INQ000527879)**.

63. On 1 March 2020, the Secretary of State asked for information in response to a Sunday Times article reporting that a UK team from the Randox laboratories had developed a coronavirus test that "produces results 10 times faster than existing tests" **(BD2/46 - INQ000546867).** PHE provided a briefing to the Secretary of State **(BD2/ 47 - INQ000049481),** setting out that:

    a. all commercial instruments would have an advantage over the situation where samples were sent away to a small number of NHS laboratories – and PHE was engaging with 15 different companies, with the aim of being fair to all commercial companies

    b. the platforms selected for early testing at Colindale had been selected based on early feedback from NHS laboratories as to what instruments they already used in their laboratories

    c. an assessment of the full range of platforms used in NHS labs for which COVID-19 tests were under development would be completed that week, but PHE already knew from its testing that one commercial assay was comparable to

the test already being used and several NHS laboratories had specifically asked to prioritise that platform, which was the Randox platform

d. PHE was undertaking ongoing horizon scanning for instruments that looked promising, including those made by Randox and Roche **(BD2/ 48 - INQ000546862)**, and that it was watching the progress of products receiving CE marking **(BD2/49 - INQ000546866)**

e. the testing time for the Randox instrument, which had been prioritised for testing, was around the same as for the assay then being used by PHE in Colindale and in regional laboratories, but its key advantages were its ease of use by NHS staff, combined with being onsite and readily available to local healthcare providers

f. the Department was regularly checking the FIND website, which had a comprehensive list of emerging tests recorded without bias **(BD2/ 50 - INQ000546927)**

g. horizon scanning for testing platforms also included regularly checking across a network of international colleagues, including in the US and Hong Kong

64. On 13 March 2020, Grail Biotech UK contacted the Cabinet Office, advising them that the pharmaceutical company Roche's Cobas 8800 machines had received regulatory approval in the United States. The Cobas 8800 system operated a fully automated, real time PCR. The system was high speed with a reported throughput of up to 9,800 tests per hour. PHE was contacted so that they could consider the potential use of this technology **(BD2/51 - INQ000546871)**.

65. On 14 March 2020, PHE established a partnership with Roche, following a request from the government's Chief Scientific Advisor to set up such a partnership **(BD2/ 52 - INQ000562612; BD2/53 - INQ000562613)**. PHE and the Roche Partnership delivered automated testing sites which allowed testing at high-throughput PCR machines. These sites allowed testing to be scaled up rapidly in case of a sudden outbreak. The automation process is discussed in the following exhibit **(BD2/54 - INQ000546925).**

66. PHE validated a range of testing technologies that would allow capacity and capability to be further expanded. PHE provided an assessment of testing technologies at its facility in Porton Down.

67. From late March 2020, Professor Sir John Bell led the COVID Testing Scientific Advisory Panel (CTSAP) which was set up to provide additional advice on the effectiveness of test kits provided by different suppliers, and to help inform decisions on the deployment of tests and on further procurement. CTSAP drew upon the testing triage process led by Dr Sam Roberts in NHSE, which reviewed and evaluated offers to supply test kits, consumables and other testing equipment, as well as new and complete testing solutions.

68. Once an initial triage of submissions had been completed by NHSE's Triage Team, the CTSAP:

    a. conducted an initial review of new and complete testing solutions, as well as new specifications/designs for supplies to support existing testing capacity for both antigen and antibody testing. Where necessary, the CTSAP provided experimental data to support decisions

    b. provided a recommendation on whether solutions should be a) approved as a high priority, b) approved, or c) rejected

    c. submitted its recommendations to NHSE's Triage Team who sent them to PHE (for lab-based tests) or the Medicines and Healthcare products Regulatory Agency (MHRA) (for home-based antibody tests), where a decision was made on whether the new tests should be procured

69. Where products were assessed as high priority, the Panel had the authority to authorise procurement of tests/materials they deemed effective, prior to PHE/MHRA evaluation being undertaken. In these instances, PHE and MHRA conducted a longer-term evaluation of high priority products in parallel to the procurement process **(BD2/55 - INQ000546875; BD2/56 - INQ000546876; BD2/57 - INQ000546877**

70. **; BD2/58 - INQ000546878)**.

Prioritisation of Testing

71. With the significant increase in testing demand in March 2020, it was clear that existing capacity would not be able to meet demand fully and that some form of triaging or prioritisation would be required.

72. On 11 March 2020, the Secretary of State met departmental and PHE officials to discuss testing capacity and prioritisation **(BD2/59 - INQ000527906; BD2/60 - INQ000527907)**.

The PHE Incident Director Dr Susan Hopkins confirmed to the Secretary of State and departmental officials that it was anticipated that testing demand would outstrip capacity by the end of April 2020 if testing continued under current guidelines. The Secretary of State emphasised the need to put every effort into building capacity to offer as many tests as possible.

73. Dr Susan Hopkins shared guidelines on prioritisation with officials in the Department, PHE and the NHS on 11 March 2020 **(BD2/61 - INQ000527899; (BD/62 - INQ000087299).** PHE published these guidelines on GOV.UK the following day **(BD2/63 - INQ000527898)**.

74. The prioritisation system for COVID-19 testing agreed by PHE, NHSE and the Department on 11 March 2020 was based on 6 groups, prioritised on the basis of clinical need, in this order:

    a. 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

    b. Group 2: all other patients requiring admission to hospital for management of pneumonia, ARDS or ILI

    c. Group 3: clusters of disease in residential or care settings, e.g., long-term care facilities, prisons or boarding schools

    d. Group 4: community patients meeting the case definition (over 60 years old or with risk factors for severe disease) and not requiring admission to hospital, with prioritisation given to age

    e. Group 5: community patients meeting the case definition (under 60 years old with no risk factors for complication) and not requiring admission to hospital

    f. Group 6 (test last): contacts of cases

75. On 12 March 2020, the UK moved from the 'Contain' to 'Delay' phase of its response to the virus (see Statement A for Module 7, paragraphs 132 to 133).

76. On 14 March 2020, it was announced that Groups 1, 2 and 3 above were prioritised for testing, with capacity then standing at around 3,000 tests a day **(BD2/30 - INQ000527886; BD2/64 - INQ000562606)**.

77. On 15 March 2020, PHE circulated an explanatory note to PHE and NHS staff, explaining why all essential workers could not be tested at that point, the main reason being limited laboratory capacity **(BD2/65 - INQ000527904)**.

78. In paragraph 224 of Sir Christopher Wormald's Third Witness Statement **(BD2/66 - INQ000144792)**, he comments that by mid-March 2020, "*testing capacity had reached around 5000 per day, but was being exceeded by demand*".

Coordination of Testing

79. March 2020 also marked the point at which the Department took on a greater role in coordinating and overseeing the testing programme, in view of the projected increase in testing demand and the need for additional testing capabilities.

80. In March 2020, the following senior staff were brought in to lead and coordinate workstreams and set up teams:

    a. a Director to oversee commercial development of a new network of testing sites and laboratories across the UK (which would become Pillar 2 of the Testing Strategy, covered in paragraphs 91 to 146 below) **(BD2/67 - INQ000527910)**

    b. a Director to lead on antibody testing and work with PHE and surveillance programmes (which would become Pillars 3 and 4 of the Testing Strategy) **(BD2/68 - INQ000527916)**

    c. a Director to lead on testing supply **(BD2/69 - INQ000562636)**

    d. a Director to coordinate an emerging overall testing programme of several workstreams that would form an integral part of the Testing Strategy **(BD2/70 - INQ000562610)**

81. The government held regular COVID-19 testing workshops, focusing on the key strategies and approaches for scaling up the UK's testing capacity.

Engagement with the Private Sector

82. As it took on a coordinating role, the Department was also increasingly involved in discussions with industry on offers of commercial testing. In particular, the Department was keen to increase diagnostic testing capacity in ways that would support testing of key workers, who were needed to keep essential services running, and to explore antibody

testing (where individuals who had recovered from COVID-19 may have developed immunity). It was recognised that increasing testing capacity and infrastructure could also facilitate a wider range of uses for testing, including surveillance and more universal testing.

83. On 17 March 2020, the Secretary of State and the Prime Minister met with industry leaders to encourage them to support diagnostic testing, which would become a key part of the Testing Strategy **(BD2/71 - INQ000527908)** (which is described in more detail from paragraph 91). As a result of the summit with industry leaders, 4 approaches were agreed:

    a. Increasing the NHS lab-based testing capacity from 5,000 per day to 25,000 per day (which would become Pillar 1 of the Testing Strategy).

    b. Extending national mass population surveillance (which would become Pillar 4 of the Testing Strategy).

    c. Mass-market testing for ordinary people using pregnancy-test-style pin-prick blood tests.

    d. Urgent and specific antigen testing for protecting frontline staff and maximising the workforce **(BD2/67 - INQ000527910)**.

84. On 18 March 2020, the government announced that it was working to increase testing capacity in PHE and the NHS to 25,000 tests a day, an ambition that would form a key part of the Testing Strategy **(BD2/72 - INQ000527909)**.

85. At the Prime Minister's daily press conference on 19 March 2020, the Prime Minister reiterated the ambition to increase overall testing capacity. At the same press conference, the Prime Minister announced that the government was pursuing scope to procure a test for antibodies for the virus, which might help identify people who had developed immunity **(BD2/73 - INQ000527912)**. These ambitions would form a key part of the Testing Strategy.

86. The Department established a '3-month battleplan to tackle the virus and protect life', the first version of which was commissioned by the Prime Minister on 20 March 2020 **(BD2/74 - INQ000049742; BD2/75 - INQ000049743)**, with the agreed version released on 22 March 2020 **(BD2/76 - INQ000106279; BD2/77 - INQ000106289)**.

87. The battleplan outlined the ambition of achieving 250,000 tests per day by the end of April 2020, this being a mixture of antigen and antibody tests **(BD2/78 - INQ000546873)**. This number was considered to be achievable within the existing capacity of centralised testing laboratories **(BD2/79 - INQ000546886)**.

88. As stated in paragraph 161 of Statement A, the Department's Executive Committee (ExCo) and COVID-19 Oversight Board oversaw the Department's implementation of the COVID-19 battleplan and progress was reported to the Oversight Board by individual workstream SROs or their deputies on a weekly basis. Paragraphs 159 to 162 of Statement A outline how the testing and tracing programme was reflected in the battleplan. As part of its wider COVID-19 response structures, the Department also established a dedicated testing cell, led by Kathy Hall **(BD2/80 - INQ000562635)**.

89. The first national lockdown began on 23 March 2020, which meant that all households in effect began self-isolating, with very limited exceptions such as travelling to and from work where this was absolutely necessary and could not be done from home **(BD2/81 - INQ000106288).**

90. On 28 March 2020, as set out in paragraph 126 below, as a result of increases in testing capacity, frontline hospital staff and other members of their family or household started to be eligible for symptomatic testing. This meant that they could return more quickly to work if they – or the other family/household member with symptoms – tested negative. This approach was then extended to other NHS staff and to social care staff **(BD2/82 - INQ000527915)**.

COVID-19 Testing Strategy

91. At the end of March 2020, the Secretary of State requested that the Department publish its plans to increase testing capacity and to explain to the public how this increased capacity would be used **(BD2/83 - INQ000106460)**. By the beginning of April 2020, with testing capacity at around 12,750 tests per day, an additional network of new labs and testing sites was being rolled out across the UK. This would provide thousands more tests a day for critical workers, starting with NHS staff **(BD2/84 - INQ000527918)**.

92. The Department had established a more coordinated and strategic approach to testing for COVID-19, which included discussing potential new strategies for testing, including "pooled testing", as part of plans to increase symptomatic testing for priority patients in

March 2020 **(BD2/85 - INQ000562609)** and as part of the approach to testing in schools **(BD2/86 - INQ000194026)** and care homes **(BD2/87 - INQ000253877)**.

93. On 1 April 2020, the Office for Life Sciences (OLS) (a joint unit of the Department and the then Department for Business, Energy & Industrial Strategy (BEIS)) provided a briefing note to the Department, outlining its views on the option to create a decentralised network for PCR testing. Whilst OLS outlined certain advantages of such an approach, such as increased resilience in case one site was unable to operate, the overall recommendation was that a decentralised testing approach would prove disadvantageous, as it would require the Department to 'micro-manage' a complex network of partners and increase logistical complexity. Matching the testing capacity of one centralised laboratory would require 100 smaller sites to deliver 1,000 tests **(BD2/88 - INQ000562616; BD2/89 - INQ000562617)**. Any further requests for reasons for a centralised approach and/or against a decentralised approach should be addressed to OLS.

The Five Pillars

94. On 1 April 2020, the Secretary of State circulated an internal message within the Department, outlining the key points of the upcoming testing strategy for COVID-19. The core of the strategy was to increase testing and to have hundreds of thousands of swab tests every day, so that everyone who needed a test could have one.

95. The Department published its Testing Strategy on 4 April 2020 **(BD2/83 - INQ000106460; BD2/90 - INQ000562620)**, by which time over 200,000 tests had already been processed. The strategy included ambitions grouped under 5 "pillars", or workstreams, which were developed out of the No10 summit on 17 March 2020. The 5 pillars are set out in Table 1, and further details are described in the paragraphs below.

96. The objective of the strategy was to ensure testing was available to anyone who needed it, as part of the wider government strategy to protect the NHS and save lives **(BD2/91 - INQ000055915).**

97. The strategy aimed to improve both capacity and speed of testing, whilst also improving local access to testing in order to improve the reach and impact of testing across harder to reach groups.

98. The strategy outlined that testing was being expanded to critical NHS staff and their families to help ensure that they could stay in work if they tested negative and to get them

back to work as quickly as possible if they had symptoms. Once widespread testing was available, critical NHS staff and other critical key workers would be tested repeatedly.

Table 1: Five Pillars of the Testing Strategy

Pillar	Workstream Activity	Target Group for Testing	Organisations Responsible
Pillar 1	Scaling up NHS diagnostic testing with more swab tests	Those with a medical need and critical key workers	PHE (with the Roche Partnership) and NHS laboratories
Pillar 2	Increase diagnostic testing with infrastructure for mass swab testing	Key workers in the NHS, social care and other sectors	Cross-organisational partnership to create infrastructure for mass testing including universities, research institutes and companies (such as Amazon and Boots) and a network of new laboratory (including lighthouse laboratories) and testing sites across the UK
Pillar 3	Mass antibody testing to test for immunity	General public	The Department committed to engaging with commercial companies to develop mass testing for COVID antibodies and review effectiveness
Pillar 4	Surveillance testing to learn more about the disease and help develop new tests and treatments	General public	A PHE led surveillance programme using a high accuracy antibody test at PHE Porton Down The COVID-19 Infection Survey (CIS) run by the Office for National Statistics (ONS) with academic and commercial partners
Pillar 5	Diagnostics National Effort - build a mass testing capacity at a completely new scale	General public	The Department working with the life sciences industry in the medium to long term to support building laboratory capacity and the provision of reagents and equipment

99. While the strategy aimed to ensure testing was available for anyone who needed it, it set out that a phased approach would be required. Priority would initially be given to patients who needed a test to support effective treatment and would then expand to NHS workers and their families (given the importance of facilitating the return of NHS staff to the frontline as soon as possible after they or family members had displayed COVID-19 symptoms). Testing would then expand to other critical key workers and into the wider

community. The strategy would involve both building capacity and ensuring that new test products were reliable.

100. The Department worked to ensure that, as testing capacity increased, it was used efficiently and effectively, i.e. those who were eligible for testing received a test at an appropriate testing site at the appropriate time and results were provided in a timely manner as part of an effective end-to-end process.

101. The 5 pillars were designed to work together to enhance the UK's testing capacity, with the initial aim of delivering 100,000 tests per day by the end of April, and to provide a greater understanding of the spread of COVID-19, especially amongst key workers **(BD2/92 - INQ000562618)**.

Implementing the Testing Strategy

102. Following the publication of the Testing Strategy, cross-government partnerships worked on developing and implementing the 5 pillars of the strategy. From April 2020 onwards, several pilot projects were developed across the pillars to evaluate testing technology being developed by industry and academia. This included new testing technologies and ways to improve the speed of results and accessibility to testing **(BD2/ 93 - INQ000592499; BD2/94 - INQ000562621; BD2/ 95 - INQ000527920; BD2/ 96 – INQ000527921; BD2/ 97 - INQ000527922; BD2/ 98 - INQ000527923; BD2/ 99 - INQ000592502; BD2/ 100 - INQ000527937; BD2/ 101 - INQ000527938; BD2/ 102 - INQ000527939)**.

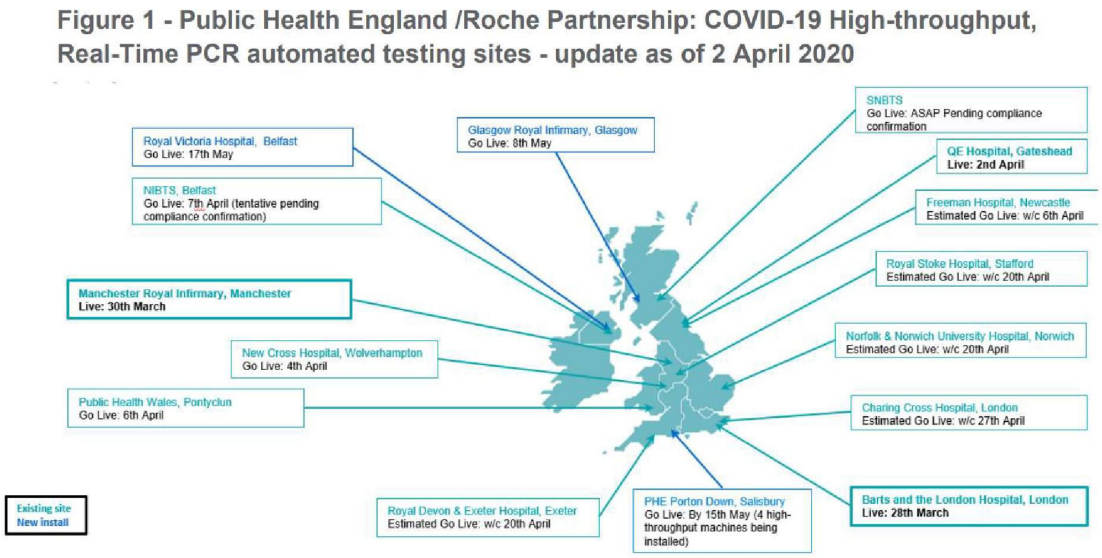
103. These pilot projects required extensive collaboration and cross-organisational partnerships, not just across government but across other sectors as well.

Pillar 1 - Scaling up NHS diagnostic testing with more swab tests

104. The first pillar had the objective of working with partners in the private sector to provide additional NHS testing capacity for those who were most seriously ill and to ramp up the volume of NHS testing available for critical staff. The MHRA published specifications for the Laboratory Information Systems, including testing kits, commercial terms, reagents and IT arrangements, so that potential partners could easily make offers to augment the supply.

105. Pillar 1 sought to increase NHS testing capacity to 25,000 tests per day in PHE and NHS laboratories and through the Roche Partnership mentioned above in paragraph 66.

Figure 1: PHE/Roche Partnership automated testing sites as of 2 April 2020, published in the Testing Strategy



Source: Public Health England (2020)

106. By 30 April 2020, over 41 centres had been set up and another 48 were due to go live later that week (**BD2/103 - INQ000106391**).

Pillar 2 - Increase diagnostic testing with infrastructure for mass swab testing

107. Pillar 2 involved partnering with universities, research institutes and commercial partners to create brand-new swab testing capacity to enable a greater range of key workers to return to work more quickly and to boost public service capacity **(BD2/ 104 - INQ000106460).** The additional testing sites that were set up followed specific laboratory protocols and used highly automated procedures to analyse as many tests per day as possible.

108. Pillar 2 included:

    a. increasing laboratory capacity

    b. ensuring the sufficient supply of testing kits

    c. scaling up home testing

109. On 27 March 2020, as part of Pillar 2, the Department announced that a number of organisations were supporting the establishment of 3 new laboratories in Milton Keynes, Alderley Park and Glasgow. Commercial partners also provided logistical and technical support **(BD2/105 - INQ000562611)**.

110. This new diagnostic laboratory network became known as "lighthouse laboratories", or "mega labs", taking their name from the PCR testing technology, which uses fluorescent light to detect the virus. On 9 April 2020, the Secretary of State officially opened the first lighthouse laboratory in Milton Keynes, which had the capacity to test tens of thousands of patient samples each day **(BD2/106 - INQ000562626)**.

111. The new lighthouse laboratories that were set up to facilitate the large-scale testing of samples used highly automated procedures, allowing them to work 24 hours a day and handle as many tests as possible. To that end, the Department was involved in developing a digital platform to support the end-to-end testing process. Before rolling out this platform, the Department ensured that it met clinical safety standards. Whilst this happened, manual processes continued to be used, to ensure continuous testing capacity **(BD2/107 - INQ000562629)**.

112. On 9 April 2020, the Department published guidance for organisations seeking to support the UK's testing programme for COVID-19. This guidance included the criteria that a prospective testing laboratory would have to meet **(BD2/108 - INQ000562625)**.

113. During April 2020, Pillar 2 planned the setup of over 50 regional testing centres, in partnership with Boots, prioritising locations where prevalence of COVID-19 was highest. OLS led work to operationalise this service in partnership with NHSX, NHS Digital and Deloitte, with Deloitte, facilities management providers and Boots staffing the first 5 regional testing centres **(BD2/109 - INQ000546882)**.

114. To support accessibility of testing sites, in late April 2020 following a successful pilot, mobile units staffed by the British Army were deployed to test essential workers and people in vulnerable settings including care homes, police stations, prisons and other essential service sites (**BD2/110 - INQ000562639)**.

115. To further improve accessibility to testing, a home delivery service was launched in early April 2020 in partnership with Royal Mail and Amazon **(BD2/111 - INQ000562637)**.

116. Amazon was involved in helping the government understand the challenges of establishing a mass testing infrastructure and a home-testing service for critical key workers. It supported the government through its logistics network, directly delivering home test kits to key workers **(BD2/109 - INQ000546882)**. Amazon also worked with the government to develop the 'alpha for digital solution', a digital solution for making online ordering more effective.

117. The Department initially envisaged that, once Amazon had delivered test kits to people's homes, individuals would return completed tests by Royal Mail. However, Royal Mail informed the Department that they would shortly be moving to a system in which only 16,000 of their 100,000 post boxes would have collections every day, with the remaining 84,000 having collections every 2 days. Because of the risk of home tests degrading before reaching laboratories, individuals would need to send their test to the laboratory from one of the 16,000 "priority" post boxes. This was considered problematic, as many people lived too far away from one of these priority post boxes and the Royal Mail digital solution was complicated.

118. The Department therefore adopted a revised model, in which couriers picked up the majority of completed tests directly from the home of the individual and took them directly to the laboratory. Despite the 30% higher cost of such a scheme (£702,000 versus the Royal Mail-only option cost of around £546,000 per 100,000 tests returned), the Department considered that this was justified by the gains in user experience, speed and reliability **(BD2/112 - INQ000546881)**.

Expanding Testing Capacity and Eligibility

119. The successful implementation of Pillars 1 and 2 of the Testing Strategy facilitated further expansion in the groups eligible for COVID-19 testing as well as paving the way for implementing later pillars. This section describes how testing capacity was widened, including the strategy relating to testing of key workers in sectors such as the NHS and adult social care.

Adult Social Care

120. As is described in Section 5 of this statement, adult social care does not have the same relationship with the Department as the NHS. However, the government's role in testing in adult social care settings increased significantly during this time. At the beginning of

February 2020, the Department established weekly meetings with stakeholders who represented the adult social care sector, including care home representatives.

121. On 6 March 2020, the Department formed a senior leaders' group, which was called the National Adult Social Care and COVID-19 Group, to oversee the development and implementation of DHSC's response to COVID-19 in adult social care. Representatives included the NHS, the Care Quality Commission (CQC), the Local Government Association, PHE, as well as Carers UK, the Care Provider Alliance and the Association of Directors Adult Social Services (ADASS).

122. From this point, the Department worked rapidly to implement testing for social care workers where there was excess capacity in local areas, and worked with PHE, ADASS, NHSE and CQC to plan for a wider rollout **(BD2/113 - INQ000562630; BD2/114 - INQ000562631)**.

123. This engagement facilitated the Department's publication of the 'COVID-19: Our action plan for adult social care' **(BD2/115 - INQ000106354)** on 15 April 2020. The Social Care Action Plan is covered in greater detail in the Department's Module 6 corporate witness statements.

124. Testing in the adult social care sector is also described in Section 5 of this statement, in paragraphs 297 to 310.

Testing NHS and Social Care Key Workers

125. On 28 March 2020, the Department made recommendations to ministers on the testing and prioritisation of keyworkers, including NHS staff. The overall objective outlined was to test all keyworkers who were self-isolating because they or another household member had COVID-19 symptoms but who, provided they did not have COVID-19, were well enough to work.

126. Given that there were 71,961 COVID-19-related absences in hospital trusts on 25 March 2020, the submission recommended that the initial priority needed to be the testing of NHS staff and social care workers, given the importance of health and social care services, particularly for older and vulnerable people **(BD2/116 - INQ000546879)**.

127. In a subsequent submission to the Secretary of State sent on 7 April 2020, the Department set out that, due to logistical challenges in some key workers and their families using the available testing sites, only about 60% of the available capacity in

keyworker centres was being utilised. To remedy this, the Department was working with chief executives of NHS trusts to provide daily information on fill rates and to encourage them to ensure that sufficient staff were using the available capacity, as well as building a digital system to make it easier for staff to book slots **(BD2/117 - INQ000546893)**.

128. The submission recommended that commercial swab testing remained prioritised for NHS workers but that, where there was excess capacity, other high priority key workers, starting with social care workers, should be able to access testing **(BD2/ 118 - INQ000562622; BD2/119 - INQ000562623)**.

129. The Secretary of State provided comments the next day **(BD2/120 - INQ000562624; BD2/121 - INQ000562627; BD/122 - INQ000083645); ; BD2/123 - INQ000546885)**. The Health Ministerial Implementation Group (HMIG) held a meeting on 9 April 2020 which discussed the paper and the first phase of key worker testing which would focus on key NHS and adult social care staff. HMIG coordinated and advised on public sector issues relating to the COVID-19 pandemic across the UK, excluding the NHS and social care. It reported to daily COVID-19 meetings, chaired by the Prime Minister **(BD2/ 124 - INQ000562632; BD2/125 - INQ000562633)**.

Further Impacts of Implementation of Pillars 1 and 2

130. Facilitated by implementation of Pillars 1 and 2, daily testing capacity continued to increase throughout April and May 2020. Numbers circulated by the Department on 30 April 2020 show that the aim of delivering 100,000 tests per day was achieved by that date, having grown from 15,000 daily tests at the start of April 2020, and that the number of tests conducted was below the available laboratory capacity at the time **(BD2/126 - INQ000562643)**.

131. This major expansion in testing capacity enabled the Department to continue to widen eligibility for testing to support key workers and vulnerable groups. This was critical both in reducing transmission rates in vulnerable settings and in enabling key workers to return to work more quickly if they or other household members had symptoms and tested negative.

132. On 15 April 2020, additional groups became eligible for testing alongside the launch of the Social Care Action Plan on the same day **BD/127 - INQ000233794),** which is also covered in paragraph 123 above and in Section 5 of this statement. Prioritisation focused on protecting vulnerable groups, including, for example, testing of people being

discharged from hospital to a care home, irrespective of whether they were symptomatic. It also included testing of all symptomatic care home residents and testing of all symptomatic staff in care homes and symptomatic members of their household (an expansion of the existing policy of testing the first 5 members of a cluster) **(BD2/128 - INQ000327838)**.

133. On 17 April 2020, the government announced that symptomatic testing was being extended to a wider range of frontline workers and members of their family or household, as well as NHS and social care workers. These additional frontline workers eligible for testing included the police, the fire service, frontline benefits workers and those working with vulnerable children and adults **(BD2/129 - INQ000527931)**.

134. As well as expanding testing capacity, it was also important to make testing available in ways that would improve accessibility of testing, taking account of the needs and preferences of different population groups. This was achieved by, for example, increasing the number of mobile testing sites and home testing kits, and the implementation of the online portal, allowing those eligible to book a test online **(BD2/130 - INQ000562640)**.

Expansion to Asymptomatic Testing

135.

Thanks to the successes of implementing Pillars 1 and 2 of the Testing Strategy, eligibility for testing was expanded again on 28 April 2020 to include anyone over the age of 65 with symptoms and anyone with symptoms whose work could not be done from home
On 28 April 2020, the government also announced that it would be rolling out testing of asymptomatic residents and staff in care homes and of patients and staff in the NHS (BD2/103 - INQ000106391). Further details about asymptomatic testing can be found
in Section 5.

Pillar 3 - Mass antibody testing to test for immunity

136. The third pillar focused on scaling up the availability and use of antibody tests, with the aim of establishing whether people had had the virus and whether having had the virus meant that they were then immune. The rollout of these antibody tests would take place outside of conventional NHS structures and would involve cooperation with a private sector provider.

137. An antibody test is a blood test that can check if an individual has previously been exposed to a pathogen. At the time the strategy was published, antibody testing was still being developed and had not yet proven to be effective. This pillar involved the

Department engaging with several commercial partners to test the quality, accuracy and effectiveness of antibody tests. The Department purchased stocks of tests to enable clinical testing and ensure future supply if they proved effective.

138. On 31 March 2020, ministers agreed to run a week-long pilot project with 1,000 individuals **(BD2/131 - INQ000233786; BD2/132 - INQ000562615)**.

139. On 23 April 2020, Professor Sir John Bell brought together a consortium of academic and commercial partners to explore delivering a large-scale, high-throughput serology testing programme. A serology test is a diagnostic blood test that identifies whether antibodies to a particular pathogen exist, thus indicating whether a person has been infected with or exposed to that pathogen before. The consortium met on 23 April 2020 **(BD2/133 - INQ000562638)**.

140. In March and April 2020, as part of Pillar 3, a validation exercise was conducted via PHE to determine the sensitivity and specificity of several lateral flow device (LFD) test kits from suppliers. An LFD test is a device intended to rapidly detect the presence of a target substance, which can include antibodies or antigens, in a liquid sample without the need for specialised and costly equipment. For instance, the home pregnancy test is an LFD test that detects a specific hormone. Following this validation exercise, it was determined that none of the evaluated test kits met the required standards. It was therefore recommended that the Department cancel existing large-scale orders for such tests and engage with manufacturers to produce LFD tests that met the required standards. Once a testing kit had been developed that met the required standards, it was recommended that the information about this device be made open source, to exploit all available manufacturing capabilities in the UK **(BD2/ 134 - INQ000592501; BD2/ 135 - INQ000562621)**. The use of LFD tests for antigen testing is described in Section 3.

Pillar 4 - Surveillance Testing to Support Understanding

141. The fourth pillar focused on using testing to improve surveillance of the spread of the disease as a learning tool to help understand the rate of infection and geographical spread of the virus and to inform decision making. As with other strands of the strategy, work to pilot and develop projects to improve testing capacity for surveillance began in early 2020.

142. In February 2020, PHE started a surveillance programme at Porton Down to identify early evidence of circulation of the virus in England. The programme worked with the NHS to

test patients with severe respiratory infections who did not meet the case definitions of COVID-19 at the time. This was alongside 100 primary care sites in England that contributed to the programme **(BD2/136 - INQ000562601)**.

143. On 23 April 2020, the Office for National Statistics started the COVID-19 Infection Survey which sought to understand how many people currently had or had previously caught COVID-19 (whether they were symptomatic or not) and, later on in the pandemic, whether people had a strong response to COVID-19 vaccination **(BD2/137 - INQ000527933)**.

144. Other surveillance studies were also set up in partnership with or funded by the government. These included:

    a. **Real-time Assessment of Community Transmission (REACT**) – April 2020 to present. This COVID-19 surveillance programme was led by a team of scientists, clinicians and researchers at Imperial College London, alongside colleagues at Imperial College Healthcare NHS Trust, Ipsos MORI and other partners.

    b. **REACT-1** – April 2020 to March 2022. The REACT-1 study was a large population study that measured the prevalence of SARS-CoV-2 in the general population and estimated how quickly the virus transmitted between people (R value) across a 2-week period each month while the survey was active. Over 150,000 unique participants took part each month and the results provided insights about SARS-CoV-2 and COVID-19, in addition to the prevalence of emerging variants.

    c. **REACT-2** – June 2020 to May 2021. The REACT-2 study estimated how many people had already had SARS-CoV-2 in England. Over 900,000 participants took an antibody finger prick test at home to provide evidence of changes in antibody levels in the general population. The study also helped scientists learn more about the usability and accuracy of different antibody tests, as well as how vaccines affect antibody levels in people.

    d. **ZOE Health Study** – March 2020 – ongoing. This is a not-for-profit initiative run by health science company ZOE in collaboration with King's College London. It is one of the world's largest ongoing studies of COVID-19 symptoms and facilitates detection of hotspots. The ZOE app provides insights into asymptomatic and symptomatic information across the UK and at its peak had

up to one million users logging on per week **(BD2/138 - INQ000562712)**. It was supported by a grant from PHE (and its successor UKHSA) up to March 2022 and continues its activities with updates regularly provided on its website.

e. **CoMix study** – March 2020 to March 2022. CoMix was a social contact survey study launched in March 2020 by the London School of Hygiene and Tropical Medicine, with data collected by Ipsos MORI. The study was funded by several bodies, including the National Institute for Health Research (NIHR), the Medical Research Council (MRC), and PHE (and its successor UKHSA). Participants reported the total number and nature of direct contacts they had the day before they took the survey: people with whom they had at least a brief face-to-face conversation or with whom they had any sort of skin-to-skin contact. Participants were also asked additional questions, such as whether they wore a face mask on the day of reported contacts. The data was analysed to produce a fortnightly report for the Scientific Pandemic Influenza Group on Modelling, Operational sub-group (SPI-M-O) and SAGE, which tracked the reproduction number, participants' mean contacts over time and differences in regions.

f. **sKIDs surveillance study** – June 2020 to September 2020. Launched as a partnership between PHE and the Department for Education (DfE) with funding from DHSC, the sKIDs study focused on providing a better understanding of prevalence in pre and primary schools in the last half of the summer term of 2020 after national lockdown measures ended. It was designed to provide the government with insights to inform the COVID-19 response and the management of education settings in a safe and secure way. The study was based on blood and swab tests of children and staff from 131 pre-school and primary schools across England. Following completion of sKIDs, the study evolved into the sKIDsPLUS study (September 2020 to June 2021), which looked at enhanced COVID-19 surveillance in 20 secondary schools and colleges and the development of 2 larger-scale surveillance, immunity and health and wellbeing studies in primary and secondary schools, SIS1 and SIS2.

g. **UK Biobank SARS-CoV-2 serology study** – May 2020 to November 2020. This study, a collaboration between UK Biobank and the University of Oxford, was designed to establish the proportion of Biobank participants who had previously had SARS-CoV-2 infection, the strength of different groups' antibody responses and how this varied over time. It used a fixed cohort of 20,000 people

registered with UK Biobank and their families who self-administered finger prick blood samples once a month for 6 months.

h. **PHE serology study** – March 2020 – ongoing. NHS T&T funding for this study was provided between March and November 2020. This was a weekly serology testing of blood samples obtained from existing sources that provided baseline data of the population presenting with antibodies. Blood samples from the NHS Blood and Transplant service, Great Ormond Street Hospital and other paediatric hospitals were analysed. Data collection continues on a small scale.

i. **COVID-19 in Prisons Study (CiPS)** – July 2020 to May 2021. This study was delivered by the University of Southampton, PHE, Ministry of Justice (MoJ) and Her Majesty's Prison and Probation Service (HMPPS). In phase 1, the study estimated the incidence of SARS-CoV-2 infection among residents and staff within 28 prisons across England **(BD2/139 - INQ000562665)**. There were 2 rounds of testing, 6 weeks apart. It also examined how the proportion of positive tests and estimated incidence rate varied according to individual, institutional and factors. In phase 1, the study enrolled 6,315 staff members and 10,466 residents. Participants were tested for SARS-CoV-2 using a swab test. Staff were also tested for antibodies to SARS-CoV-2. Phase 2 focused on SARS-CoV-2 infection in prisons with recognised COVID-19 outbreaks. In 3 outbreak prisons, all participating staff and residents were tested for SARS-CoV-2 antigens at 3 different timepoints on each prison site, at day 0, 7 days later, and then 21 days later.

Pillar 5 - Diagnostics National Effort - build a mass testing capacity at a completely new scale.

145. The fifth pillar was designed to grow the UK's diagnostics industry substantially and quickly to create a new mass testing capacity. The government called on all British life science companies to turn their resources to creating and rolling out mass testing at scale. On 8 April 2020, the government requested support from businesses to help build a large domestic diagnostic industry through the provision of laboratory capacity and the provision of consumables, reagents and equipment **(BD2/140 – INQ000527925)**. Further information about the role of private testing is set out in paragraphs 243 to 250 of this statement (Section 4).

146. As pressure on demand continued, the Department, working closely with PHE, responded to improve both testing capacity and capability in laboratories. The additional testing sites that were set up, for example, followed specific lab protocols and used highly automated procedures to analyse as many tests per day as possible. One example is the Milton Keynes Laboratory, which was set to expand its lab space from 300m^2 to 800 m^2 by mid-April 2020, allowing it to process between 100,000 and 150,000 tests per day **(BD2/141 - INQ000546900)**.

How COVID-19 Tests Were Counted

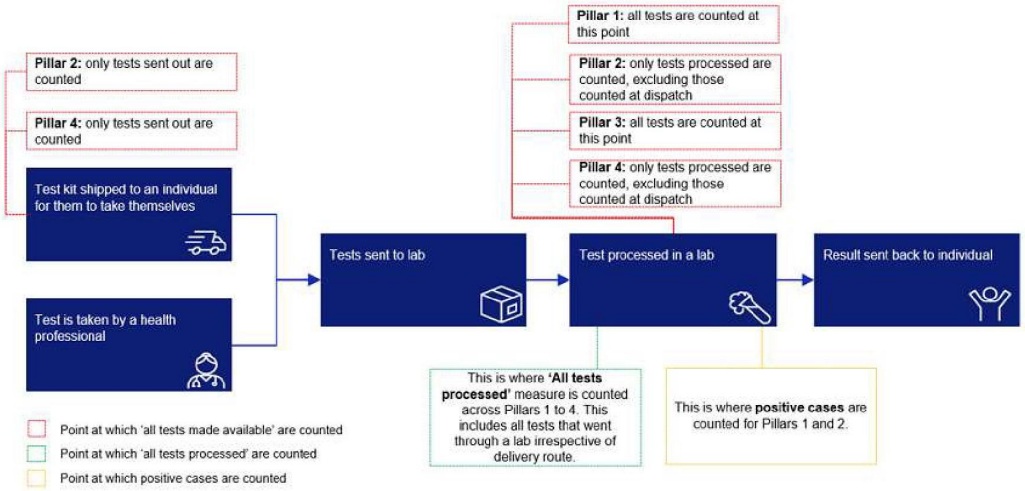
147. In June 2020 the government issued guidance titled 'Coronavirus (COVID - 19): testing data methodology'. This guidance outlined the data sources and methodology statistics on coronavirus testing. The methodology notes also contained information on the different routes for testing in relation to the 5 pillars detailed above.

148. All tests in Pillar 1 were counted at the point they were processed by a laboratory. Nose and throat swabs were counted together as one sample.

149. Tests in Pillars 2 and 4 were administered in 2 different ways and therefore fell into 2 categories, those that were counted when they were dispatched and those that were counted when they were processed by a laboratory. As in Pillar 1, Pillar 2 nose and throat swabs were counted together as one sample. Pillar 4 tests were counted either as swabs or as blood samples, depending on the study.

150. Tests in Pillar 3 were counted at the point when the blood samples were processed by a laboratory.

Figure 2: Typical testing process and results count (BD2/142 - INQ000546895)



SECTION 3: ESTABLISHMENT OF NHS TEST & TRACE

151. As work to increase testing capacity and capability grew and took on a more strategic approach, it became clear that there would be strong benefits in establishing a closer relationship between testing, contact tracing and self-isolation, both operationally and in policy terms. This led to NHS T&T being announced in April 2020. While the establishment of the new service is described in more detail in Statement A of the Department's response to the Inquiry on Module 7, this section focuses on the role that NHS T&T took on in relation to testing and the immediate impacts of bringing together work on testing, tracing and self-isolation from May 2020. Later developments, from September 2020 onwards, are described in Section 4 of this statement.

152. Building on Section 2, this section explains how the overall testing programme stabilised and developed between May and August 2020. It sets out how the strategy of high-volume testing using PCR tests, was designed to contribute, alongside other non-pharmaceutical interventions (NPIs), to reducing the risk of further national lockdown restrictions and enabling more localised, targeted measures. It also sets out developments on collaboration with local authorities on testing.

153. While NHS T&T was an England-only service, paragraphs 185 to 190 describe engagement with the devolved administrations.

Setting Up NHS T&T

154. As set out in Section 4 of Statement A, it became clear in the first few months of the COVID-19 pandemic that a joined-up approach would be more effective than managing testing, contact tracing and self-isolation as distinct policies and processes. The joined-up testing and tracing programme that began in April 2020, led by David Williams, Ed Dinsmore and Matthew Gould, rapidly evolved into the NHS T&T programme, overseen by a unit in the Department headed by Baroness Dido Harding, with the testing element of the programme led by Sarah-Jane Marsh. This unit coordinated the T&T service that was launched on 28 May 2020 **(BD2/143 - INQ000107094).**

155. When it was set up in May 2020, NHS T&T was a government funded service in England, funded through the collaboration of the Department, PHE and NHSE. The service was the responsibility of the Secretary of State for Health and Social Care and the Minister of State for Social Care. Section 5 of this statement contains further discussion of the costs of the testing elements of NHS T&T.

NHS T&T Strategy

156. NHS T&T was designed to form a central part of the government's COVID-19 recovery strategy, helping to identify, contain and control COVID-19, reduce the spread of the virus and save lives. This built on the 18 May 2020 announcement that anyone aged 5 and over with COVID-19 symptoms was eligible for a test.

157. NHS T&T brought together 4 key tools to control the virus. Each of these needed to work together strategically as well as reach individual objectives. The 4 tools and NHS T&T plans for each were:

    a. Test: increasing availability and speed of testing.

    b. Trace: when someone tested positive for coronavirus, the NHS T&T service would use dedicated contact tracing staff, online services and regional and local public health experts to identify any close recent contacts and alert those most at risk of having the virus and who need to self-isolate. At the point that NHS T&T was launched, it was planned that this would be complemented by the rollout of the NHS COVID-19 App in due course (for more details see Section 1 of Statement C).

c. Contain: NHS T&T, including the Joint Biosecurity Centre (JBC), would work with local authorities, including local directors of public health, and public health teams in PHE to identify localised outbreaks and support effective local responses, including plans to quickly deploy testing facilities in particular locations. Local authorities were supported by £300 million of new funding to help develop their own local outbreak control plans.

d. Enable: NHS T&T would help the government to learn more about the virus and, as scientific understanding developed, to explore what more could be done to ease infection control measures **(BD2/143 - INQ000107094).**

158. From its launch on 28 May 2020, NHS T&T was designed to implement and advance the Department's key policies and strategies for increasing testing capacity in England and improving the accessibility and speed of testing.

159. The effectiveness of NHS T&T depended in part on continued increases in testing capacity, alongside improvements in accessibility and speed of testing. On 7 May 2020, the Prime Minister announced the ambition for daily testing capacity to increase to 200,000 tests per day by the end of May 2020 and that testing capacity had been built up at 148 sites across the UK **(BD2/144 - INQ000562644)**. At the end of September 2020, this target was increased to 500,000 tests per day by the end of October 2020 **(BD2/145 - INQ000562670)**, with testing capacity continuing to increase throughout the summer of 2020. This more ambitious target was reached shortly after 31 October 2020 **(BD2/146 INQ000094729)**.

160. The effectiveness of NHS T&T also depended critically on public behaviours. This included individuals booking a test promptly when appropriate and following protocols for continued self-isolation if tests were positive **(BD2/147 - INQ000562651; (BD2/148 - INQ000562652**. Statement D discusses in more detail the challenges of public communications and engagement to encourage adherence to protocols for testing, contact tracing and self-isolation.

161. A key element of the NHS T&T service launched on 28 May 2020 was that anyone testing positive for COVID-19 would be contacted by NHS T&T, told to continue self-isolating and asked to share information about their recent interactions. These close contacts included all members of the same household as the person testing positive and any non-household contacts with whom they had been in close contact in the 2 days before developing symptoms, or the time since. Statement C sets out the criteria used to determine if

someone was a close contact. Other household members were asked to continue self-isolating until 14 days after the person testing positive had developed symptoms (or, if they were asymptomatic, the date of their test) and non-household contacts were asked to self-isolate until 14 days after the date of their most recent estimated contact with the positive case, to help reduce the risk of onward transmission of the virus. This further increased the importance of the speed of testing, as the earlier in the 14-day period someone was contacted, the lower the risk that – if infected – they would pass on the virus.

162. Contacts were also reminded that, if they developed symptoms, they should follow the standard procedures, namely, to book a test and for other members of their household to self-isolate immediately **(BD2/149 - INQ000562657)**. If they tested positive, they were expected to follow the same procedures as any other person who tested positive, namely, to stay at home for 7 days from the point of developing symptoms or until their symptoms had passed. If they tested negative, they were told to complete the 14-day self-isolation period, as the varying incubation period for COVID-19 meant that they could be infected without the infection yet being detectable from a test.

163. The NHS T&T service was designed to provide clear information to people who had tested positive and their contacts, explaining what they had to do and how they could access local support for self-isolation if needed **(BD2/150 - INQ000562645; BD2/151 - INQ000562646; BD2/152 - INQ000562647; BD2/153 - INQ000562648)**. Guidance was also made available online **BD2/154 - INQ000562656)**.

Influencing Behaviour

164. In early July 2020, NHS T&T and the Department reported on the findings from a strategic analytical framework to estimate the impact of NHS T&T's activities. The modelling suggested that the activities of NHS T&T were, at that point, resulting in a 10% reduction in the R number (the reproductive rate of the virus). In order to avoid another lockdown, it was estimated that the reduction in the R number would have to be at least 40%. The ability to achieve that reduction would depend on a range of NPIs, including but not limited to NHS T&T activities. The findings indicated that the most important way in which NHS T&T could help further reduce the R number was to increase testing penetration across the population, i.e. increase the number of people coming forward for testing if they had symptoms or were asked to participate in asymptomatic testing programmes, and that additional interventions needed to be focused on that goal **(BD2/155 - INQ000546898)**.

165. On 7 July 2020, the Covid NPI Design Panel published 'Maximising behavioural compliance after lockdown', which suggested several approaches and behavioural interventions to help contain the virus including:

    a. prioritising the most important behaviours/mitigation factors that would reduce viral spread

    b. using if-then messaging, e.g. 'If I have a fever, then I get a test immediately'

    c. not expecting messaging/information to change behaviour on its own: it was also important to provide changes to the environment so that intentions translate into action

    d. using the power of social norms to drive compliant behaviour by making it visible

    e. removing barriers to compliance before reaching for sanctions

    f. giving people reminders of what they were supposed to do

    g. using objective data on actual behaviour, rather than self-reported data, where possible

    h. using natural and deliberate variation to experiment with what works best **(BD2/156 - INQ000546899)**

Phases 2 and 3 of the Testing Strategy

166. By 30 May 2020, testing capacity had reached 200,000 tests a day **(BD2/157 - INQ000527952)**. The Department was at this point able to move to a more ambitious phase of its testing strategy.

167. In late May 2020, Departmental officials began working internally on a medium-term testing strategy. This aimed to increase the scale, accessibility and speed of testing, as well as expanding the range of potential uses of tests to help contain the virus **(BD2/158 - INQ000562653; BD2/159 - INQ000562654; BD2/160 - INQ000562655)**.

168. On 3 June 2020, the Secretary of State received a submission that outlined the following Phase 2 objectives **(BD2/161 - INQ000527953; BD2/162 - INQ000527954; BD2/163 - INQ000527955; BD2/164 - INQ000562658)**:

a. Ensuring testing was effective in containing the virus – which meant a relentless focus on quality, access and speed across the programme and building the capacity to enable more frequent, targeted testing of priority groups where this would improve infection control.

b. Improving insight by expanding the use of testing to improve understanding of the virus and its transmission, including through use of antibody testing and wider research.

c. Preparing for Phase 3 – including potential winter pressures – by scaling up capacity to build resilience, including the ability to surge testing through mobile testing units and pop-up test sites, and driving innovations to enable not only more tests but testing in different ways, with the aim of helping to open up the economy.

169. By summer 2020, the testing programme had started to prepare for Phase 3. These preparations included work to achieve the ambition set by the Prime Minister to increase laboratory capacity to 320,000 tests per day by the middle of July 2020 and 485,000 tests per day by September 2020, as outlined in a submission to the Secretary of State on 3 June 2020 (**BD2/161 - INQ000527953; BD/162 - INQ000527954)**.

170. On 12 June 2020, a Departmental submission set out that, once a decision was made to increase lab capacity, it would take 6-8 weeks to bring that capacity onstream and that, as a result, decisions would need to be taken as soon as possible (**BD2/165 - INQ000562659; BD2/166 - INQ000562660; BD2/167 - INQ000562661)**.

171. It was planned the increase in capacity would be achieved through 5 routes:

a. exploring the potential to expand NHS capacity

b. expanding existing lighthouse laboratories

c. building new lighthouse laboratories

d. increasing use of point of care testing in a variety of settings

e. validating and piloting innovations in testing such as end-point PCR and gene sequencing

172. These routes were intended to enable more people to access tests by a wider variety of routes. Improving accessibility to testing and increasing capacity were key to improving detection and in turn helping reduce transmission, manage illness and get better data on transmission and changes to the virus.

Asymptomatic Testing

173. As already set out, many of the changes that the Department made to policy and practice during the pandemic were a response to advances in research and knowledge about the characteristics of the pathogen, to changes in the virus itself (e.g. the emergence of variants), and to the trajectory of the virus in the population (e.g. 'waves' of transmission). A key consideration in testing policy was how far and in what circumstances to test individuals who did not have symptoms of the virus ('asymptomatic testing'), who could nonetheless be infected with the virus, both to identify a greater proportion of people with the virus (and take appropriate action to prevent onward transmission) and to give people greater confidence (if they tested negative) to undertake economic, educational and social activities.

174. Early in the pandemic, when there was both limited testing capacity and limited knowledge of whether asymptomatic cases could transmit the virus, asymptomatic testing was used only for specific purposes. These purposes, as approved by PHE and the CMO, included (**BD2/168 - INQ000527947; BD2/169 - INQ000109384;**

    a. testing to identify high-risk patients (early warning of infection), including, for example, those being discharged from hospitals into care homes as outlined in Section 5

    b. assisting with prevention of nosocomial (that is, originating in a hospital) spread and outbreaks in health and care settings

    c. informing understanding of disease prevalence and surveillance

175. Throughout the process of widening testing eligibility, the Department considered and provided advice to ministers on equalities considerations for the testing programme (**BD2/170 - INQ000562642; BD2/171 - INQ000562641; BD2/172 - INQ000562650; BD2/173 - INQ000562649)**

176. As capacity increased, testing strategy evolved to expand use of asymptomatic testing to target high-risk populations. This was in line with SAGE advice to conduct further research to understand the transmissibility of the virus in high contact occupations. DCMO advice was that asymptomatic testing would be helpful to understand risk in specific populations and to provide reassurance where risk of COVID-19 was stopping those populations engaging in day-to-day activities (**BD2/174 - INQ000527956; BD2/175 - - INQ000527957)**.

177. On 28 April 2020, the Secretary of State committed to offering a coronavirus test to every staff member and resident in every care home in England, whether they were symptomatic or not. This offer was based on estimated projected growth in testing capacity; the Department expected it would shortly be possible to provide up to 30,000 tests per day specifically for residents and staff in care homes for older people (**BD2/176 - INQ000050399).**

178. On 18 May 2020, the Health Secretary announced that everyone aged 5 and over with symptoms of COVID-19 was now eligible for testing (**BD2/177 - INQ000527945)**. Capacity was around 120,000 tests a day. This allowed individuals with COVID-19 symptoms who tested negative (and other members of their household) to return to everyday life, which came with social and economic benefits. For those who tested positive, they and their household would continue to self-isolate, and their close contacts were traced and also advised to self-isolate.

179. On 18 June 2020, the Secretary of State received a submission recommending asymptomatic testing for those in high-risk groups via community testing centres and for those in high contact professions via their employers. The results of these initiatives would inform decisions on whether further interventions were needed and would help ensure that testing capacity was being used for populations with the greatest need based on their risk. Ministers approved the recommendations in the submission (**BD2/178 - INQ000527958; (BD2/176 - INQ000050399).**

180. Additional information regarding the implementation of asymptomatic testing in relation to adult social care can be found in Section 5 of this statement.

Local Collaboration and the Contain Strategy

181. As with other aspects of the government's response to COVID-19, local collaboration was central to successful delivery of NHS T&T objectives, including effective testing on a regional and local basis.

182. The government published the COVID-19 contain framework in July 2020, providing a guide for how national, regional and local partners should continue to work with each other, the public, businesses, and other partners in the communities to prevent, manage and contain outbreaks of COVID-19, including in relation to community testing. The framework was created by NHS T&T in conjunction with local authorities (including local directors of public health), PHE and other government departments **(BD2/179 - INQ000565531; (BD2/180 - INQ000546896; BD2/181 - INQ000562664).**

183. The initial framework was designed to apply to the autumn and winter periods of 2020, with the intention that it would be reviewed and updated as necessary in the spring of 2021. Section 4 provides further details.

184. The contain framework included an outline of the options available to local authorities to help respond to local outbreaks, including accelerated testing of asymptomatic people. It provided the basis for increased collaboration with local authorities, particularly local directors of public health, to enhance the reach and accessibility of testing, which culminated in the later development of the Community Testing Programme, described in Section 4 of this statement.

Engagement with the Devolved Administrations

185. Whilst health and social care policy is largely devolved, the UK government and the devolved administrations collaborate on some aspects of policy. The COVID-19 pandemic precipitated considerable additional collaborative working between the UK government and the devolved administrations.

186. This cross-UK collaboration partly used existing structures, such as the Common Framework on Public Health Protection, which had been established by the Department, the devolved administrations and the UK's national public health organisations in response to the UK's exit from the EU.

187. Additional structures were put in place throughout the pandemic to support policy coordination and decision making between the UK government and the devolved administrations at official and ministerial level, including formal UK government Cabinet Committee structures like Cabinet Office Briefing Room (COBR) meetings, Ministerial Implementation Groups (MIGs) and COVID Operations Committees. Regular discussions also took place between the UK government, the Health and First Ministers of Scotland and Wales and the Northern Ireland Executive.

188. The Department established and chaired Daily National Sector calls from 21 January 2020 to coordinate the health and social care system response and maintain a common situational awareness of the national and international impacts of COVID-19. These calls continued until summer 2020 and covered reported cases and testing, repatriation, case definitions, port health measures, clinical management, the picture across all 4 UK countries, and policy/operational decisions, and were attended by officials from the Department, the devolved administrations, NHSE and PHE.

189. The Coronavirus (COVID-19) Action Plan, published on 3 March 2020 **(BD2/182 - INQ000057508)** (as referred to in paragraph 36 of Sir Christopher Wormald's Third Witness Statement dated 29 March 2023) **(BD2/66 - INQ000144792)**, was developed under the leadership of the Department following a request from the Secretary of State, recorded on 10 February 2020 **(BD2/183 - INQ000106107).** The decision-making structures in the Action Plan relied on Cabinet Office/No10 structures, including Ministerial Cabinet meetings. The Action Plan was jointly agreed between the UK government and the devolved administrations.

190. All UK health ministers established regular, dedicated conversations on the health and social care COVID-19 response from 10 March 2020. These provided an important forum for the discussion of key issues and coordination on responses and communications with the devolved administrations. These meetings are outlined in Clara Swinson's Third Witness Statement dated 4 September 2023 **(BD2/184 - INQ000273636).** The collaboration with the devolved administrations is described further in paragraphs 15-18, 53 and 81 of Sir Christopher Wormald's Third Witness Statement dated 29 March 2023 **(BD2/66 - INQ000144792)**.

SECTION 4: EXPANSION AND PRIORITISATION OF TESTING STRATEGY

191. With increasing transmission rates in September 2020, urgent additional action became necessary to increase testing capacity further. The government also pursued a significant expansion in asymptomatic testing as part of a wider set of additional NPIs. The advent of vaccination capability in winter 2020-21 and the emergence of more transmissible variants also influenced decisions about testing. This section describes these developments and the Department's testing response from September 2020, including NHS T&T moving to UKHSA in October 2021 and finishing with the Living with COVID strategy published in February 2022 **(BD2/185 - INQ000086652).**

192. Following the significant further expansion of PCR testing capacity between the launch of NHS T&T in May 2020 and September 2020, testing strategy was adapted to expand asymptomatic testing, supported by the introduction of rapid LFD tests **(BD2/186 - INQ000546889)**.

Responding to Continued Demand

193. Despite the unprecedented increase in testing capacity from March 2020 onwards, testing demand continued to put pressure on services into the autumn. There was a sharp increase in cases in September 2020. The reopening of schools in September 2020 also had significant impact on testing demand and there were indications that those without symptoms were ordering tests despite being ineligible.

194. In early September 2020, the increased demand for COVID-19 testing led to shortages of tests in certain areas, as widely reported by the media at the time **(BD2/187 - INQ000546904; (BD2/188 - INQ000546901)**. As a temporary solution, the online booking portal was paused for some periods, to regulate the demand for tests and allow existing tests to be processed. This meant the public were temporarily unable to book or order tests during those periods. The Department's priority was maintaining a steady flow of tests into labs, increasing lab capacity, and thereby preventing backlogs.

195. On 17 September 2020, COVID-O discussed testing prioritisation. The government was already prioritising care home testing, and the committee agreed that some public sector workers should also be prioritised **(BD2/189 - INQ000090181)**. On 21 September 2020, a policy paper titled 'Allocation of COVID-19 swab tests in England' was published **(BD2/190 - INQ000562669)**. At the point it was published, 225,000 tests were being

processed per day (an average of the prior week) and plans to increase capacity to 500,000 swab tests by the end of October 2020 were in motion. The paper outlined the following priority order for testing based on evidence of risk and demand:

a. NHS hospital patients

b. care home residents and residents

c. NHS staff, GPs and pharmacists

d. teaching staff with symptoms

e. the public where they had symptoms in areas where there were high case rates

f. the general public where they had symptoms

196. Public communications were an important element of the government response, including seeking to ensure that only eligible groups ordered tests and to reduce the risk of people ordering more tests than they needed and putting additional pressure on services **(BD2/191 - INQ000562668)**. Statement D provides a comprehensive overview of communications related to testing, contact tracing, and self-isolation from January 2020 to March 2022. This includes efforts to reach a wide, diverse audience on key issues, including communicating using different media, styles, and languages.

197. While additional testing capacity continued to be developed in this time, capacity for testing had to match laboratory capacity to cope with clinical samples. Much of the new testing capacity was targeted at areas with the highest need, including those where there was an outbreak, as well as prioritising at-risk groups.

198. On 29 September 2020, the COVID-O committee met again to discuss testing **(BD2/192 - - INQ000090086)**. Testing demand was still exceeding capacity and there was the possibility of it continuing to do so until the end of October 2020. The CEO of NHS T&T reported to the committee that there were a number of initiatives being introduced to increase capacity and reduce processing backlogs. The speed at which laboratory capacity could be expanded was the biggest constraint to the programme, with other constraints including the impact of self-isolation requirements on the laboratory workforce.

199. As demand continued to outstrip supply in October, the Department considered further operational changes to ensure that available testing was allocated to priority groups **(BD2/193 - INQ000562671; (BD2/194 - INQ000562673)**.

200. In guidance published on 28 October 2020 **(BD2/195 - INQ000562678)**, the Department set out how it would meet public demand for testing, including outlining:

a. the different laboratories processing COVID-19 swabs, including details of the lighthouse laboratories, partner laboratories and mobile processing units (MPUs)

b. the locations of the laboratories

c. use of automation and technology

d. the skilled workforce required to deliver the testing programme

e. the geographical spread of laboratories and how this helped match testing capacity to local needs and how it helped keep turnaround times low so the contacts of positive cases could be traced as quickly as possible **(BD2/196 - INQ000562689)**

LFD Tests and the Expansion of Asymptomatic Testing

201. A key policy change at this point was the significant expansion of asymptomatic testing, which involves testing of individuals who, while not presenting with symptoms, might still be infected and capable of spreading the virus. Up until late 2020, testing had largely focused on those with symptoms, with asymptomatic testing used on a smaller scale in areas with outbreaks and in high-risk settings.

202. In the early stages of the pandemic, asymptomatic testing was done via PCR testing. Throughout the summer of 2020, NHS T&T had explored new or improved testing technologies with the aim of enabling asymptomatic testing to be offered on a greater scale and to enable more rapid testing.

203. LFD tests were developed, tested and trialled during mid-2020, and introduced for use in the national testing programme in late 2020. As set out above in paragraph 140, an LFD test is a device intended to rapidly detect the presence of a target substance (in this case antigens) in a liquid sample without the need for specialised and costly equipment. The simplicity of LFD testing meant that it could enable widespread self-testing for COVID-19, helping improve both accessibility of testing and the speed of test results **(BD2/197 - INQ000546903; (BD2/198 - INQ000546902)**.

204. A UK study initiated by the Department in June 2020 between PHE and the University of Oxford, FALCON-C19 (Facilitating AcceLerated Clinical Validation of Novel diagnostics for COVID-19) aimed to determine the accuracy of several new diagnostic tests. The main aim of the study was to allow companies to get their new tests to market faster and to allow patients and the NHS to benefit from the best new testing technologies as soon as it became apparent that they were safe and accurate **(BD2/199 - INQ000396180; (BD2/200 - NQ000562685; BD2/202 - INQ000562675).**

205. In early October 2020, the Department informed the Secretary of State that, in light of the progress made in the validation of LFD tests, the Prime Minister had instructed the Department to purchase all available supplies of LFD tests without further delay.

206. The urgency for this action reflected the rising global demand for LFD tests, their constrained supply and the rapid progress made in their scientific validation. As a result, the Department recommended that the government purchase an initial total of 223.5 million LFD tests from 3 suppliers, at a cost of £804 million. These tests would be manufactured and delivered through to 31 December 2020 and would be in addition to the 31 million tests that had already been ordered and were set to be delivered by 14 October 2020 **BD2/201 - - INQ000592510)**.

207. From November 2020, asymptomatic testing using LFD tests started to be used on a much wider basis with 2 aims. The first aim was to identify people who unknowingly had the virus, enabling those who tested positive and their close contacts to self-isolate and thereby helping break chains of transmission and support critical industries, key workers and institutions. The second aim, which was increasingly important over this period, was to enable individuals with negative test results to feel more confident in engaging with economic, educational and social activities (e.g. working, sending children to school or visiting older relatives).

208. On 15 October 2020, the Secretary of State received a submission and agreed with its proposals ahead of an announcement of a series of LFD trials to understand **BD2/202 - INQ000562675; BD2/203 - INQ000562676; BD2/204 - INQ000562677)**:

    a. the sensitivity and specificity of tests in different operational situations.

    b. the efficacy of tests when:

        i. substituted for PCR tests

ii. combined with PCR tests to offer greater protection and minimise risk

iii. used to reduce the need for self-isolation for contacts of positive cases

c. how to distribute tests effectively to optimise uptake, ease of use and test completion

209. On 16 October 2020, following successful evaluations and trials over the summer of 2020 which were described in Section 3 of this statement, the Prime Minister announced that, based on evidence of the high effectiveness of LFD testing, the government had bought millions of tests and would be starting to distribute and trial the tests across the country over the following weeks. The announcement explained that this would allow more frequent testing with quicker turnaround times for NHS and care home staff, enable additional testing in schools and universities, and help local directors of public health to control localised outbreaks, with initial prioritisation of the Liverpool City Region, Lancashire and any other areas that had entered into the Very High alert level **(BD2/205 - INQ000086826).**

210. Mass testing in local communities (later called community testing) using LFD tests was trialled in Liverpool in early November 2020 over a period of 10 days, with over 100,000 people tested at asymptomatic test sites. An interim evaluation report summary was published on 14 January 2021 **(BD2/206 - INQ000562688)**.

211. On 9 November 2020, the Prime Minister announced, against the backdrop of increasing numbers of COVID-19 patients in hospital, that there would be a rollout of 600,000 LFD tests to local authorities across England **(BD2/207 - INQ000546906)**. These tests were sent to 50 local authorities as part of a pilot to test priority groups, with local directors of public health determining prioritisation based on the local needs of their communities. On the same day, the Secretary of State wrote to upper-tier local authority leaders to confirm that all local authorities would be offered a weekly allocation of LFDs **(BD2/208 - INQ000488831).**

212. On 11 November 2020, the University of Oxford and PHE confirmed that LFDs showed high specificity and were effective at identifying most individuals who were infectious **(BD2/209 - INQ000562682)**.

213. On 21 November 2020, COVID Operations (COVID-O) met to discuss testing **(BD2/210 - - INQ000090954)**. Reflecting on the Liverpool community testing pilot, the Secretary of

State said that the pilot had not included specific incentives for individuals to get tested, beyond the incentive of helping to combat the virus, and that take up of testing had been lower than expected. Test positivity had also been lower than expected, which might have been down to more cautious individuals taking up the offer of testing. The Secretary of State highlighted that LFD testing could in future replace the need for contacts of positive cases to self-isolate, instead taking a test each day. The Committee discussed community testing further and the COVID-19 Taskforce was asked to return with more refined proposals.

214. On 11 November 2020, NHS T&T estimated that by late November 2020 there would be around 156 million LFDs available, with around 255 million available by the end of December 2020 **(BD2/211- INQ000546907)**.

215. On 10 December 2020, the Department informed the Secretary of State and Lord Bethell that, since the initial contracts for LFDs were issued, the scientific base and policy direction of travel had moved significantly and that the Department now had a clearer understanding of what was needed from tests from an operational perspective.

216. The Department advised ministers that a Lateral Flow Oversight Group, led by Professor Sir John Bell and Susan Hopkins and Oxford academics, strongly advised that any future procurement must guarantee that LFD tests used a nasal swab, were available in mixed pack sizes, and had passed Porton Down's phase 3a validation. The group recommended that the Department launched a new procurement based on a reassessed set of requirements.

217. The Lateral Flow Oversight Group advised that any delay in delivery of LFD tests would put future plans, including widespread asymptomatic testing, at risk, especially with increased global demand resulting from more widespread interest in LFD tests.

218. To ensure the continued supply of LFD tests during this tender process, the Department was exploring procuring surge capacity of 60 million tests with existing suppliers **(BD2/212 - INQ000546909)**.

2020-21 COVID Winter Plan

219. On 23 November 2020, during the second national lockdown which began on 5 November 2020, the government published its COVID-19 Winter Plan **(BD2/213 - INQ000106867)**. This set out the government's strategy for reducing the rate of infection and protecting

vulnerable population groups. On 10 December 2020, NHS T&T published a business plan as part of the Winter Plan **(BD2/214 - INQ000059228)**.

220. The COVID-19 Winter Plan included a focus on further improving testing capacity, improving turnaround times for tests, and enhancing local engagement, with a commitment that the government would work with local directors of public health to ensure that testing could reach those most at risk of infection, building on the expansion of asymptomatic testing begun in November 2020.

Community Testing

221. The Winter Plan included a community testing programme, which gave local authorities in Tier 3 areas (those with higher transmission rates and consequently more restrictions) the opportunity to participate in a 6-week testing surge, providing asymptomatic testing for the general population as well as targeting high-risk workplaces and industries, hard-to-reach communities and schools in a coordinated effort to drive prevalence down **(BD2/213 - INQ000106867)**. Paragraphs 233 to 242 below set out how the Community Testing Programme evolved.

222. During a COVID-O Cabinet Committee meeting to discuss the Winter Plan on 21 November 2020, it was noted that levels of turnout for community testing and compliance with self-isolation for those who tested positive needed to be very high to have a successful outcome. This was compared to a testing programme in Slovakia, where a turnout of 97% had resulted in prevalence initially falling by over 50%, driven by mandatory testing, with 10 days of self-isolation required for those who chose not to test. It was pointed out that, by contrast, the Liverpool trial had relied on community-minded communications messages alone to drive participation, and that there had been low turnout with only 20% of the eligible population tested in 2 weeks. As a consequence, COVID-O recommended stronger incentives for testing participation and compliance with self-isolation, together with improved support for those who tested positive **(BD2/215 - INQ000562683)**. Statement C sets out steps taken to support people to self-isolate and, in turn, help promote take-up of testing.

Testing as an Alternative to Self-Isolation for Contacts of Positive Cases

223. The Winter Plan also announced that the government intended to introduce frequent testing as an alternative to the need for self-isolation for people who had had close contact

with someone with COVID-19, with contacts only needing to self-isolate if they tested positive. The government announced that it would trial this approach in Liverpool and in some additional settings, with the intention of rolling it out across the country early the following year. In practice, as set out in Statement C, it took longer than anticipated to assess the effectiveness of contact testing as an alternative to self-isolation and the need for such an approach was largely superseded by the decision from August 2021 to make contacts who were fully vaccinated or under the age of 18 exempt from the requirement to self-isolate. As set out in Statement C, daily testing for fully vaccinated contacts was used briefly as an additional safeguard in response to the emergence of the Omicron variant in December 2021.

LFD Testing in Care Homes

224. Following the publication of the government's COVID-19 Winter Plan, in mid-December 2020 the Department provided additional recommendations and steps to enhance testing of care home staff from January 2021. This was described in a submission to the Minister for Care on 15 December 2020.

225. To that end, the Department asked the Social Care Working Group of SAGE for advice about how to use LFDs to best effect, alongside already established weekly PCR tests amongst social care staff.

226. While not yet finalised at this point, the SAGE advice was to include maintaining existing weekly PCR tests for social care staff, while also adding an LFD test on the same day, as well as for staff returning from leave. This updated approach was designed to detect staff with lower viral loads, with over 90% of the results available within 72 hours.

227. The submission set out plans to support this enhanced testing strategy by sending up to 16 million LFD tests to care homes across England by 18 December 2020 and by updating testing guidance for care homes and communicating the updated guidance to the sector **(BD2/216 - INQ000059278).**

228. The Minister for Social Care approved the approach outlined in the submission on 16 December 2020 **(BD2/217 - INQ000546914; (BD2/216 - INQ000059278).** Department officials met on 21 December to discuss an increase in staff testing. The following day at the COVID-O meeting it was agreed that staff would be asked to do a PCR and LFD test

once a week and a further LFD test mid-week **(BD2/218 - INQ000546916; (BD2/219 - INQ000059379; (BD2/220 - INQ000546915; (BD2/221 - INQ000091133)**.

LFD Testing in Schools and Colleges and for Key Workers

229. In December 2020, the Department announced that it would roll out mass LFD testing for schools and colleges early in 2021, building on its earlier use at universities. NHS T&T confirmed it was also rolling out LFD tests for asymptomatic testing for key workers, such as in food processing plants.

Dealing with New Variants

230. At the end of 2020, a new and more transmissible variant of COVID-19 (B.1.1.7) (initially known as the Kent Variant and later 'Alpha') began to spread very quickly across the UK. The government responded by introducing a new Tier 4 'Stay at Home' alert level in the regions most affected and then nationally across England. The government was informed by the British Embassy in Berlin on 24 December 2020 that a woman travelling from London to Frankfurt had tested positive for this new variant **(BD2/222 - INQ000546918)**.

231. In late December 2020, the Department was informed by the Joint Biosecurity Centre that it was possible to test for this new variant with PCR tests and that this variant was starting to spread more widely in UK care homes **(BD2/223 - INQ000546917)**.

232. Updated testing procedures and new tests also began to be developed to detect the new Alpha Variant; other countries, such as Denmark, Japan and Canada, started producing these in early 2021 **(BD2/224 - INQ000106743)**.

Community Testing Programme

233. The Community Testing Programme was launched in December 2020, initially as part of the government's COVID-19 Winter Plan for 2020-21 (as set out above in paragraphs 221 to 222), to enable local authorities with high prevalence of COVID-19 to work in partnership with the UK Government to accelerate a reduction in prevalence by identifying asymptomatic cases through local testing and supporting them to self-isolate.

234. The programme initially involved offering asymptomatic testing to everyone over 11 years old in high-prevalence areas of the North East, the North West and Yorkshire and the Humber, except for the clinically extremely vulnerable who would continue to receive the

same testing services as before (BD2/225 - INQ000546905; (BD2/226 - INQ000592511; (BD2/227 - INQ000562684).

235. These 3 regions were selected because they contained almost all the local authority areas that had been under Tier 3 (or similar) restrictions for the longest, having experienced high case rates over an extensive period.

236. By 8 January 2021, the Community Testing programme had established over 400 sites in 114 local authorities. At a COVID-O meeting on the same day, the Community Testing Programme SRO outlined plans to expand asymptomatic testing to make the programme a national one.

237. In February 2021, the government merged the Community Testing Programme and other local testing led by directors of public health into a single offer to local authorities and extended the programme to all local authorities across England. A key principle of the programme was to provide national support and funding for testing that was prioritised and targeted locally, with directors of public health and local authorities developing approaches that worked best for their citizens (BD2/228 - INQ000497451).

238. Local authorities developed their own asymptomatic testing approaches, with central support from NHS T&T. The Community Testing Prospectus was published to explain the aims of the Community Testing Programme, how the programme worked and what support was available to local authorities.

239. The government supported local authorities that joined the Community Testing Programme with LFDs and guidance on how to set up and safely operate asymptomatic test sites. NHS T&T regional convenors and Community Testing Programme Liaison Teams supported local areas in both the design and delivery of community testing. A clinical standard operating procedure and lateral flow testing guidebook were provided, which included:

    a. proposed citizen testing journeys, both digitally and non-digitally enabled, which could be tailored to suit local needs

    b. guidance on the end-to-end testing process, including the required quality assurance and clinical governance processes

    c. digital support for testing processes and digital software solutions for user registration and capture of results

d. guidance on how to select new test sites, based on their suitability for and proximity to community groups and how to set up and run sites, including templates to help optimise site layouts based on size and throughput

e. guidance on how to order test kits, personal protective equipment (PPE) and other recommended materials, supported by the Community Testing Programme Liaison Teams

f. a workforce blueprint, providing information on the roles and tasks needed to operate a testing site and indicative workforce sizes based on the size of test sites

240. In addition to the guidebook, local areas were able to draw on centrally provided tools, insights and information to help develop a suitable workforce to support the delivery of community testing.

241. NHS T&T regional convenors provided a link back into NHS T&T and the Department and supported coordination between areas and with government agencies.

242. The Department and the devolved administrations engaged with each other in the development of community testing, but there were some differences in how community testing was delivered across the 4 UK countries. The Department is unable to comment on the approaches taken by the devolved administrations, but information, learning and experience were widely shared.

Accreditation of Private Testing

243. In addition to expanding testing through NHS T&T, the government also sought to help business organisations and individuals set up their own testing arrangements where they wished to do so.

244. To that end, the Department implemented a single accreditation approach for all end-to-end privately provided COVID-19 testing services, covering the minimum standards for testing. This accreditation provided assurance that test providers' services met agreed minimum standards and regulations, including: the specificity and sensitivity of the test, sample collection, the processing of the test at a testing site and in a lab, General Data Protection Regulation (GDPR) requirements and data reporting.

245. The Department provided guidance on these minimum standards for testing **(BD2/229 - INQ000562672)** and presented the accreditation data of participating providers in internal dashboards to Lord Bethell **(BD2/230 - INQ000562692; (BD2/231 - INQ000562694; (BD2/232 - NQ000562693)**.

246. On 17 December 2020, the government published its list of approved private providers of COVID-19 testing. The new accreditation process for private testing that came into force at this time was faster and more efficient, with tests being accredited solely through the United Kingdom Accreditation Service (UKAS). UKAS is a government appointed body to assess and accredit organisations that provide services including certification, testing, inspection, calibration, validation and verification **(BD2/233 - INQ000562686; (BD2/234 - INQ000562687)**.

247. NHS T&T established a Private Sector Testing Steering Group, which first met on 24 May 2021, to help align any private sector testing arrangements with the DHSC T&T Strategic Plan and to provide strategic direction for policy and engagement activities **(BD2/235 - INQ000562695; (BD2/236 - INQ000562696; (BD2/237 - INQ000562697)**.

248. In a letter sent to the Secretary of State on 10 August 2021, the Minister for Health and Social Services in Wales raised certain concerns about private testing arrangements. These included concerns about lack of clarity on the list of accredited private providers and issues with the quality and completeness of data being transferred from private labs via DHSC/PHE **(BD2/238 - INQ000562699)**.

249. By early September 2021, the successful rollout of vaccines, combined with the NHS T&T programme and other measures to reduce transmission, had enabled a situation in which the government was considering options to scale down publicly funded tests, whilst helping stand up a private testing market, enabled by the accreditation system **(BD2/239 - INQ000562700; (BD2/240 - INQ000562701)**.

250. As a possible alternative to a private testing market, in September 2021 the government considered but rejected the option of charging users for publicly provided tests.

Roadmap Out of Lockdown

251. Following the significant restrictions in place over winter 2020-21, there was an increased economic, educational and social need – combined with increased public pressure – to ease restrictions, together with increased opportunities to do so as vaccinations were

rolled out more widely. The government's strategy for exiting lockdown conditions carefully and safely was published on 22 February 2021, as the 'Roadmap Out of Lockdown'.

252. At that point, over 17 million vaccinations had already been delivered, but there were concerns that easing restrictions too quickly would increase transmission rates.

253. The Roadmap outlined how lockdown restrictions would start to lift through 4 steps starting on 8 March 2021. Step 1 included twice-weekly rapid testing for secondary school and college students alongside regular testing for teachers. Step 4 involved reopening some business premises and easing some restrictions on large-scale events and performances, supported by – among other measures – the use of testing **(BD2/241 - INQ000234765)**.

254. In April 2021, PHE and NHS T&T produced a delivery plan to support the Roadmap **(BD2/242 - INQ000203617).** . The Delivery Plan aimed to mitigate increased risk of transmission as the country re-opened, supported by testing capacity, as of 31 March 2021, of over 650,000 PCR tests per day and almost 2,000 asymptomatic test sites and 1,100 symptomatic testing sites.

255. The Delivery Plan had 4 themes:

a. continuing to develop a response that was fair, worked for all and targeted enduring transmission

b. ensuring that advice, guidance and actions were evidence-based and timely

c. continually improving the end-to-end NHS T&T service, in line with evidence of need

d. helping contain further outbreaks, particularly those involving variants of concern

Events Research Programme

256. As part of the Roadmap out of Lockdown, the government launched the Events Research Programme (ERP). The programme was run by the Department for Digital, Culture, Media and Sport (which in 2023 became the Department for Culture, Media and Sport when its digital responsibilities were transferred to the Department for Science, Innovation and

Technology) with significant DHSC input. The programme oversaw a range of pilots to build evidence to inform government decision making on Step 4 to ease restrictions on large events. The programme aimed to assess the risks of transmission in various event settings and evaluate mitigation strategies, including pre-event testing, ventilation, crowd management, and the use of face coverings.

257. Phase 1 of the ERP ran from 17 April 2021 through to 15 May 2021, with findings published on 25 June 2021 **(BD2/243 - INQ000182250).** This phase focused on gathering initial data on transmission risks, testing results and the effectiveness of mitigation strategies.

258. Phase 2 built on the insights from Phase 1 to refine safety protocols and expand the range of pilot events. The comprehensive findings from all phases, including phase 3, were published on 26 November 2021, providing evidence to inform government decisions on easing restrictions and facilitating the safe return of large-scale events **(BD2/244 - INQ000562702; (BD2/245 - INQ000562704; (BD2/246 - INQ000562705; (BD2/247 - INQ000562703**).

Universal Testing Offer

259. On 19 March 2021, the Secretary of State wrote to the Prime Minister to outline plans for a single testing offer for the general public **(BD2/248 - INQ000562690; (BD2/249 - INQ000562691)**. This would be a significant expansion in asymptomatic testing policy beyond the groups targeted locally under the Community Testing Programme and those eligible nationally for asymptomatic testing such as frontline health and care workers, care home residents and school children and their families. On 1 April 2021, the Secretary of State received a submission with delivery plans for a universal testing offer **(BD2/250 - INQ000592513)**.

260. On 5 April 2021, the Secretary of State announced the further expansion of the testing programme, often referred to as the 'universal testing offer'. From 9 April 2021, everyone in England, including those without COVID-19 symptoms, was eligible for free LFDs to use twice a week, in line with clinical guidance, to help create a new testing habit that would help the country get back to normal life. LFDs were made available through:

    a. a home ordering service

    b. workplace testing programmes

c. local authority community testing programmes

d. collection at PCR testing sites

e. on-site testing at schools and colleges

f. pharmacies

Vaccine Rollout

261. As explained in paragraph 15 of Clara Swinson's Sixth Witness Statement dated 4 September 2024 **(BD2/251 - INQ000474334)**, the scientific and clinical understanding of the virus became increasingly well developed between late 2020 and summer 2021, although there were still unknowns. The balance of the tools available had therefore changed substantively by summer 2021 to a vaccines-led approach. However, continued use of testing, alongside other NPIs, remained an important part of COVID-19 strategy in order to protect vulnerable people as well as to reduce asymptomatic transmission.

262. As a result of the COVID-19 vaccination programme, the government was able to ease restrictions in England through the first half of 2021, following the plan set out in the Roadmap in the government's 'COVID-19 Response: Spring 2021' publication **(BD2/252 - - INQ000234766)**.

263. The acceleration and extension of the vaccine booster campaign also formed a critical part of the UK's response to the Omicron variant in late 2021. High and sustained vaccine-induced protection against severe disease meant that hospitalisation rates remained lower than in previous waves. In particular, the rate of patients being admitted to intensive care and requiring mechanical ventilation declined even when prevalence had increased **(BD2/253 - INQ000562710)**.

Launch of UKHSA

264. On 24 March 2021, the government announced that NHS T&T would form part of the newly created UKHSA (renamed from the National Institute for Health Protection), with transition due to be completed by the end of October 2021.

265. Paragraphs 21 to 29 of Dame Jenny Harries's First Witness Statement dated 14 April 2023 provide a narrative of UKHSA's establishment and its relationship to predecessor organisations:

    a. UKHSA was formally launched on 1 April 2021 and became fully operational on 1 October 2021, combining the health protection clinical and scientific functions of Public Health England (PHE) with NHS Test & Trace (NHS T&T). The key steps leading to this are set out below.

    b. PHE was established as an Executive Agency of the Department of Health and Social Care (DHSC) in 2013 to protect and improve the nation's health and wellbeing and reduce health inequalities, primarily covering England but having some UK-wide responsibilities (see Section 2 for further details). In response to the COVID-19 pandemic, NHS T&T was formally established in May 2020 to lead an additional at-scale national testing and tracing service for the COVID-19 pandemic, working with PHE and others. An integral part of NHS T&T was the Joint Biosecurity Centre (JBC), which was initially established separately in the Cabinet Office.

    c. In August 2020, the Secretary of State for Health and Social Care announced that a new national body, the UK Health Security Agency (UKHSA), would be established to bring together the health protection elements of PHE with NHS T&T under a single leadership team. The announcement said that the organisation's primary focus was to ensure we had the best capability to control infectious disease and deal with pandemics or health protection crises **(BD2/254 - INQ000148429)**.

266. UKHSA was formally launched on 1 April 2021 and became fully operational on 1 October 2021, combining the health protection clinical and scientific functions of PHE with NHS T&T. From April to October 2021, PHE and NHS T&T retained their identities, responsibilities and structures whilst planning for transition to the new organisation. A transition team was established within NHS T&T to develop the structure of the new organisation.

267. The transition programme, which also included most of PHE's health improvement functions moving to the Office for Health Improvement and Disparities (OHID) within DHSC and some functions moving to the NHS, was led by Jonathon Marron, Director General of Public Health at DHSC.

268. UKHSA became fully operational from 1 October 2021. On this date, staff transferred to UKHSA from PHE and NHS T&T, both of which ceased to be operational.

269. Over time, other functions have been integrated into UKHSA. With effect from 1 April 2022, responsibility for the policy function of the Borders and Managed Quarantine Service was transferred to UKHSA from the Department. At the time of transfer, the Managed Quarantine Service had ceased live operations, following the government's decision to end hotel quarantine which took effect on 15 December 2021. UKHSA took responsibility for follow-up work including litigation, as well as policy on relevant potential future health protection functions at the border.

270. From 1 October 2022, responsibility for procurement and sourcing of COVID-19 vaccines that had been led by the Vaccine Taskforce with BEIS transferred to UKHSA as the new Covid Vaccine Unit, with the Director reporting directly to the Chief Executive of UKHSA. Some other functions of the Vaccine Taskforce transferred to the Office for Life Sciences and to DHSC.

271. In January 2022, a framework document was published, describing the continuing working relationship between the Department and UKHSA **(BD2/255 - INQ000319624)**.

272. The framework document sets out the governance and accountability framework that applies between the roles of the Department and UKHSA, including the role of the CMO; the relationship with other relevant parties including the NHS, other arm's length bodies, local authorities, and the devolved administrations; and how the day-to-day relationship between the Department and UKHSA works in practice, including in relation to governance and financial matters.

Omicron Variant and Autumn and Winter Plan 2021

273. In November 2021, UKHSA used genomic sequencing to identify cases of COVID-19 with mutations consistent with the Omicron variant (B.1.1.529).

274. The Prime Minister announced the government's response to the Omicron variant on 30 November 2021 **(BD2/256 - INQ000565612)**. In order to protect public health, confirmed cases and contacts were followed up with and requested to isolate and get tested. Testing capacity to the impacted communities was surged. In line with updated advice from UKHSA, Malawi, Mozambique, Zambia and Angola were added to the travel red list from 28 November 2021. This meant that non-UK and non-Irish nationals and residents who

had been in any of these countries in the previous 10 days would be refused entry into England. UK and Irish nationals and residents had to isolate in a government-approved facility for 10 days and take a coronavirus PCR test on days 2 and 8.

275. The government removed all countries from the red list as of 15 December 2021, explaining that the red list had become less effective as Omicron cases rose in the UK and other countries.

276. The Department identified that the Omicron variant contained potentially biologically significant mutations which might change the behaviour of the virus with regards to vaccines, treatments and transmissibility **(BD2/257 - INQ000562706)**. Early indications suggested that it might be more transmissible than the Delta variant and less susceptible to existing vaccines and antiviral medication.

277. On 8 December 2021, the Prime Minister confirmed that England would move to 'Plan B' of its Autumn and Winter Plan (which had been published on 14 September 2021) to slow the spread of the Omicron variant, reduce the chances of the NHS coming under unsustainable pressure and buy time to deliver more vaccine boosters. The Prime Minister indicated that, alongside the vaccine programme (which remained the best line of defence against COVID-19), testing would also be a vital tool in containing the spread given the likely increased transmissibility of Omicron. The public were urged to test using an LFD, particularly before entering a high-risk setting or when visiting a vulnerable person. The Prime Minister also announced that the government intended to introduce daily testing for contacts of confirmed positive cases (who, if fully vaccinated or under the age of 18, had been exempt from self-isolation requirements since August 2021).

278. People attending high-capacity venues such as nightclubs and sports events were required to demonstrate that they had had 2 doses of the COVID-19 vaccine or proof of a negative test result in the previous 48 hours. This requirement came into effect on 15 December 2021, with Parliament approving the regulations on 14 December 2021.

279. A COBR meeting on 15 December 2021 discussed Omicron and testing capacity and supply **(BD2/258 - INQ000257203; BD2/259 - INQ000257213)**.

280. In response to the Omicron variant, an Operational Response Centre (ORC) continued to operate within the Department and prepared weekly reports until the team was stood down at the end of January 2022 when prevalence had begun to significantly reduce. The

aims of the ORC are described in paragraph 36 of Sir Christopher Wormald's Eighth Witness Statement for Module 2 dated 30 August 2023:

a. Identify the potential for incidents to occur and the impact that such incidents might have across the Health and Care Sector. This was assessed regardless of cause and accounting for the effect of COVID-19 and the wider risk landscape.

b. Clearly indicate the Department's involvement in any incidents and whether that might be in a leading or supportive capacity, or merely tracking the situation for potential involvement.

c. Evaluate the Department's capability and readiness to respond to future incidents.

281. The Department's response to the Omicron variant is explained in greater detail in paragraphs 69-88, 97-111 and 144-175 of Sir Christopher Wormald's Fifth Witness Statement dated 5 August 2023.

282. The Oversight Board, chaired by Clara Swinson, remained the main structure in the Department through which the COVID-19 Programme was monitored and key risks considered. The Health Inequalities and Vulnerable Groups team supported the Oversight Board through fortnightly updates. The Oversight Board is described further in paragraphs 48-49 and 58 of Sir Christopher Wormald's Third Witness Statement dated 29 March 2023 **(BD2/66 - INQ000144792)** and in paragraphs 49 to 53 of Sir Christopher Wormald's Fifth Witness Statement dated 25 August 2023 **BD2/260 - INQ000253807)**.

Impact of Testing

283. On 10 December 2020, the Department published a Test and Trace Business Plan **BD2/214 - INQ000059228)**. The business plan cited externally reviewed model-based estimates **BD2/214 - INQ000059228)**, suggesting that in October 2020 the combination of testing, tracing and self-isolation (on symptom onset or following contact by NHS T&T) had reduced the R number by around 0.3-0.6 compared to a scenario with only social distancing. The aim of the commitments set out in the document was to increase that R reduction to around 0.5-0.7.

284. In August 2022, UKHSA produced a report titled 'Estimating the proportion of COVID-19 cases detected by testing during the pandemic: September 2020 to March 2022'. The report describes the development of a metric to estimate the proportion of COVID-19 cases detected by the testing service. Policy changes are plotted along the timeseries of the metric to explore whether any patterns emerge. Trends and relationships between the proportion of cases detected and other data sets are then explored, including testing volume and prevalence.

285. The report provides an indication of the effectiveness of the testing programme and factors that may have influenced fluctuations in the estimated proportion of cases detected. It found that the proportion of cases varied considerably over time, and that the relationship with other measures considered was complex and not easy to evaluate. The number of policy changes made during the COVID-19 pandemic and the speed with which they were made meant that it was difficult to directly link single policy changes to outcomes. The report indicates that the move from twice-weekly LFD testing to advising the public to test when they felt at risk appeared to have had little effect in terms of the ratio of tests to identified cases, suggesting self-directed asymptomatic testing was an equally valid approach **(BD2/261 - INQ000496244).**

Living with COVID and Reducing Testing

286. On 27 January 2022, after the first Omicron wave and alongside Plan B measures being lifted, the government announced that a 'Living with Covid' plan would be published as the virus became endemic.

287. On 21 February 2022, the Living with COVID-19 strategy was published. It set out the plan for removing remaining legal restrictions while protecting people most vulnerable to COVID-19 and maintaining resilience **(BD2/185 - INQ000086652),** beginning the move to treating COVID like many other endemic respiratory illnesses through public health measures and guidance. The plan was underpinned by the following principles:

    a. removing domestic restrictions while encouraging safer behaviours through public health advice

    b. protecting the vulnerable through pharmaceutical interventions and testing

    c. maintaining resilience against future variants, including through ongoing surveillance

d. contingency planning and the ability to reintroduce key capabilities in an emergency

e. securing innovations and opportunities from the COVID-19 response, including investment in life sciences

288. As part of this strategy, the government progressively reduced the use of COVID-19 testing, culminating in the ending of the universal testing offer on 1 April 2022.

289. From January 2022, people who had a positive LFD test result were no longer advised (with some exceptions) to take a confirmatory PCR test following a positive LFD test, and the testing regime in adult social care moved to using LFD tests.

290. From 21 February 2022, guidance no longer asked staff and students in most education and childcare settings to undertake twice weekly asymptomatic testing.

291. From 24 February 2022, routine contact tracing ended. This meant that fully vaccinated contacts of positive cases were no longer advised to take daily tests. Instead, guidance set out precautions to take to reduce the risk or transmission – and those testing positive for COVID-19 were encouraged to inform their close contacts so that they could follow that guidance.

292. From 9 March 2022, the recommended daily limit was set at 200,000 tests **(BD2/262 - INQ000562708; (BD/263 - INQ000562707)**.

293. From 1 April 2022, the universal testing offer for the general population ceased, with free testing continuing only for a small number of at-risk groups and social care staff.

294. On 1 April 2022, the government removed the guidance on domestic voluntary COVID-status certification and no longer recommended that certain venues use the NHS COVID Pass.

SECTION 5: TESTING IN ADULT SOCIAL CARE AND EDUCATION SECTORS

295. Throughout this statement, it has been clear that testing was particularly important for certain sectors, including key workers in health and social care. Other sectors, such as the emergency services and other key workers, were also prioritised during out of testing capacity

296. Information on testing of NHS and social care staff has been provided in paragraphs 120 to 129 and paragraphs 224 to 228 of this statement. This section provides further information about adult social care testing and additional information about testing in the education sector.

Adult Social Care Testing

297. The Department's role in testing for the adult social care sector is referred to at various points in this statement, in particular in paragraphs 120 to 124 and paragraphs 224 to 228. This section summarises some of the key decision points and policies directly impacting adult social care.

298. As described in paragraph 173 of Sir Christopher Wormald's Third Witness Statement dated 29 March 2023 **(BD2/66 - INQ000144792)**, the government had a different relationship with adult social care than it did with the NHS; the Department did not directly fund adult social care and many of the funding decisions for adult social care were made locally. Over the course of the pandemic, however, the government significantly expanded its role in adult social care beyond its statutory requirements. In particular, the Department provided clinical and operational guidance (examples of this guidance are listed in paragraph 311 below), provided free PPE and testing, collected significantly more data and provided further funding.

299. As set out in paragraph 121, on 6 March 2020, the Department established the National Adult Social Care and COVID-19 Group, to oversee the development and implementation of DHSC's response to COVID-19 in ASC.

300. This early engagement facilitated a more unified approach by health and social care sectors. On 19 March 2020, the government published 'COVID-19: the ethical framework for ASC' **(BD/264 - INQ000106252)**, which included engagement with key stakeholders and was developed in conjunction with the Chief Social Worker to support local response planning and decision making.

301. The government also introduced legislative measures as part of the Coronavirus Act (which took effect on 31 March 2020) that resulted in relaxations to provisions made in the Care Act 2014. It was intended that relaxing some of the duties of local authorities would help local authorities meet the most urgent and acute needs in the face of COVID-19, allowing them to prioritise care and support more effectively.

302. As described in Section 2, on 15 April 2020 the Department published 'COVID-19: Our action plan for adult social care' **(BD2/115 - INQ000106354)**. This document will be discussed in more detail in the Department's response to Module 6 on Adult Social Care.

303. On 27 April 2020, the Department and PHE provided updates on the COVID-19 action plan for adult social care and guidelines for dealing with COVID-19 cases within social care settings **(BD2/265 - INQ000546890; (BD2/266 - INQ000546892; (BD2/267 - INQ000546891)**.

304. In further recognition of the importance of supporting local authorities to address care needs, on 7 May 2020 the Minister of State for Care wrote to local authorities, setting out the steps the government was taking to meet the Secretary of State's commitment to offer COVID testing for all care home staff and residents **(BD2/268 - INQ000050842)**. On 13 May 2020, the Director General for Adult Social Care wrote to local directors of public health and directors of adult social services on 13 May 2020, setting out how the new testing service would be rolled out in a phased approach **(BD2/269 - INQ000106428; (BD2/270 - INQ000106427; (BD2/271 - INQ000106425; (BD2/272 - INQ000106426; (BD2/273 - INQ000106424)**.

305. This roll out was made possible by the increases in testing capacity set out in Section 2 of this statement, which meant that eligibility could be expanded to more groups at higher risk of contracting COVID-19 and/or of suffering worse outcomes if they did. This included anyone over 65 and symptomatic, as they were at higher risk of adverse consequences if they got the disease. If a care home for older people also cared for residents under 65, testing was available for all residents, regardless of age.

306. To facilitate the rollout of this testing programme, a digital portal was created to allow care home workers to access tests. Care homes were required to register online, using their CQC registration number, and were asked to confirm the number of residents and staff in the care home **(BD2/272 - INQ000106426)**.

307. The government also provided information to help staff decide if they or care home residents required a test and where such tests could be obtained **(BD2/270 - INQ000106427)**.

308. The government commitment to offer whole care home testing to adult care homes regardless of symptoms was met on 6 June 2020 **(BD2/274 - INQ000106463)**.

309. On 6 July 2020, regular weekly PCR testing for staff was introduced, and monthly testing for residents in older age care homes was set up **(BD2/275 - INQ000546888; (BD2/176 INQ000050399).**

310. As set out in paragraphs 224 to 228, the COVID-19 Winter Plan published on 23 November 2020 included steps to enhance testing of care home staff from January 2021.

List of Key Guidance

311. I am asked to provide details of guidance on social care. These are listed here.

a. £2.9 billion funding to strengthen care for the vulnerable **(BD2/276 - INQ000106253)**

b. Coronavirus (COVID-19): hospital discharge service requirements **(BD2/277 - INQ000087450)**

c. Procurement policy note 02/20: supplier relief due to COVID-19 **(BD2/278 - INQ000048823).**

d. Ethical framework for adult social care **(BD2/264 - INQ000106252)**

e. COVID 19: guidance on home care provision **(BD/279 - INQ000325235)**

f. COVID-19: guidance for supported living provision **(BD2/280 - INQ000325234)**

g. Admission and care of individuals in care homes **(BD/281- INQ000502419)**

h. Guidance on shielding and protecting extremely vulnerable persons from COVID-19 **(BD2/282 - INQ000328154)**

i. COVID 19 guidance on vulnerable children and young people **(BD2/283 - INQ000546874)**

j. List of key workers **(BD2/284 - INQ000546872)**

k. COVID 19: guidance on social distancing and for vulnerable people **(BD2/285 - - INQ000348029)**

l. COVID 19: guidance for households with possible coronavirus infection **(BD2/286 - INQ000546884)**

m. CQC letter on suspending routine inspections **(BD2/287 - INQ000303263)**

n. COVID 19: personal protective equipment **(BD2/288 - INQ000574647).**

o. Care Act easements guidance for local authorities **(BD2/289 - INQ000327802)**

p. COVID 19: scaling up testing programmes **(BD2/290 - INQ000106325)**

312. I have been asked about the operationalisation of the guidance and the decision-making process within the adult social care sector. These decisions were made by local authorities and the elements of PHE that are now part of UKHSA, and those organisations hold this information.

Education Testing

313. On 2 July 2020, the Department for Education published guidance for full opening of schools. The guidance explained the actions that school leaders should take to manage COVID-19 in their school. This included public health advice, endorsed by PHE **(BD2/291 - - INQ000497942).**

314. Further guidance was published on 15 December 2020 on asymptomatic testing in schools and colleges. Further queries in relation to testing in the education sector should be directed to UKHSA **(BD2/292 - INQ000546911)**.

Patient Testing

315. Further to what is contained in this statement, including the text and exhibits on the Department's relevant testing strategies and guidance, specific queries in relation to patient testing, including testing in relation to neonatal, paediatric and adolescent healthcare services, should be addressed to NHSE.

SECTION 6: TESTING COSTS, DATA AND MODELLING

316. This section outlines the financial commitment undertaken by the Department during the pandemic testing response, up to the end of the time-period covered by this corporate statement.

Costs

317. In a briefing note dated 27 January 2020, the government confirmed that the Department had, prior to the pandemic, a £110 million programme of investment to develop vaccines and associated technologies against diseases of epidemic potential and that it was examining whether any current technology was relevant to the new coronavirus **(BD2/293 - - INQ000562596; (BD2/294 - INQ000592498)**.

318. A submission sent to the Secretary of State on 13 April 2020 sought approval for key commercial deals to increase supply of testing swabs and reagents over the following 6 months. The companies were Roche, Abbott, Cepheid, Hologic, Qiagen and Thermo Fisher **(BD2/295 - INQ000546887; (BD2/296 - INQ000592504)**. The 'Finance' section of the submission noted that:

    a. HMT would need to be engaged on the proposed package of measures set out in the submission to ensure relevant finance approval was in place prior to any commercial agreements being finalised

    b. the funding envelope agreed with HMT for this initial testing programme was £300 million, but early indications suggested this would have to be increased to at least £750 million to cover:

        i. £300 million for in-hospital antigen testing

        ii. £350 million for an 8-week run of regional testing centres – including associated labs and logistics

        iii. £100 million for antibody testing

319. In earlier drafts of that submission, the costs for individual tests ranged from £13 to £50 **(BD2/297 - INQ000592503)**.

320. The initial budget for the NHS T&T service, made up predominantly of funding for testing, was £15 billion for the financial year April 2020 to March 2021, reflecting the significant increase in testing commitments arising from the COVID-19 Testing Strategy set out above in paragraphs 91 to 146. Between May 2020 and January 2021, NHS T&T expanded testing capacity for COVID-19 from around 100,000 to over 800,000 a day. The November 2020 spending review introduced a further £7 billion of funding to support the rollout of mass testing as well as the continued increase in testing capacity. This was

in addition to the £3 billion for mass testing already included in the initial £15 billion budget. This raised the total budget to £22 billion in the annual budget for 2020-21 **(BD2/298 - INQ000235008)**. In practice, NHS T&T spent £13.5 billion in 2020-21, of which £10.4 billion was on testing.

321. A further £15 billion was allocated to NHS T&T in 2021-22. The budget for NHS T&T was subsumed within the overall UKHSA budget for the 2022-23 financial year **(BD2/299 - INQ000546922)**.

Table 2.1: Covid-19 spend summary (Total DEL) - public services (BD2/300 - INQ000546910)

	£ billion			
	2019-20 (1)	2020-21 (2)	2021-22 (3)	Total
Support for public services (4)	**2.2**	**113.5**	**54.7**	**170.4**
Health services	**0.0**	**52.4**	**21.2**	**73.6**
of which: Test and Trace and Mass Screening (5)	0.0	22.0	15.0	37.0
of which: NHS recovery package	0.0	0.0	3.0	3.0
of which: Covid-19 vaccines procurement (6)	0.0	2.7	0.9	3.6
of which: Personal Protective Equipment (7)	0.0	15.2	2.1	17.3
of which: Other NHS and health and care services	0.0	12.5	0.2	12.6

Contain Outbreak Management Fund

322. The Contain Outbreak Management Fund (COMF) gave English local authorities financial support to be used for activities associated with testing, contact tracing and management of local outbreaks. This document sets out how this fund operated and how it adapted over time in response to the development of the COVID-19 pandemic: **(BD2/302 - INQ000546919)**.

323. In June 2020, the government distributed £300 million to local authorities, initially in the form of a 'Test and Trace Support Service Grant' to action the development of local outbreak management plans. All 151 upper-tier local authorities published Local Outbreak Management Plans by 1 July 2020.

324. The Test and Trace Support Service Grant was subsequently renamed the Contain Outbreak Management Fund and expanded to give local authorities further financial support. The criteria for distribution and spending were also adapted to allow local authorities to tailor their COVID-19 responses to reflect the needs of their local communities **(BD2/302 - INQ000546908)**. Funding provided in the financial year 2020-21 could be carried forward into the following financial year (2021-22) but any funding carried forward had to be spent in that year **(BD2/301 - INQ000546919)**. Additional information regarding the Contain Outbreak Management Fund can be found in Section 1 of Statement C.

Infection Control Fund

325. The Infection Control Fund was first introduced in May 2020. It was extended in October 2020 and by March 2021 had provided over £1.1 billion of ring-fenced funding to support adult social care providers in England for infection prevention and control (IPC).

Rapid Testing Fund

326. On 2 December 2020, visitor testing began in the first care homes with the government sending out millions of LFD tests to care homes over the course of December 2020 **(BD2/303 - INQ000527967)**.

327. On 23 December 2020, the government announced an extra £149 million to support the rollout of LFD testing in care homes. The main purpose of this funding was to support additional rapid testing of staff in care homes, and to support visiting professionals and enable indoors, close contact visiting where possible. This included adult social care providers with which the local authority did not have a contract.

328. This was a new grant, with separate conditions to the original Infection Control Fund (which ran from May to September 2020) and the October 2020 extension to the Infection Control Fund. This additional funding provided further help to protect residents and

workers from COVID-19 and brought the total ringfenced funding for care settings to £1.3 billion **(BD2/304 - INQ000576744)**.

329. On 24 March 2021, the Department released guidance on the use of LFD tests for visitors and visiting professionals to care homes **(BD2/305 - INQ000546921)**. On 18 June 2021, further guidance for care homes on enhanced staff testing using LFD tests was published to help further reduce the spread of COVID-19 in these settings.

Infection Control and Testing Fund

330. In March 2021, due to the success of the Infection Control Fund and the Rapid Testing Fund in supporting care providers to reduce transmission and re-enabling close contact visiting, the Infection Control Fund and Rapid Testing Fund were consolidated into a single Adult Social Care Infection Control and Testing Fund and extended until June 2021, with an extra £341 million of funding.

Testing Data, Data Sharing and Modelling

331. This section outlines decisions taken by the Department on data and modelling in relation to testing.

332. The Inquiry has requested further information in relation to the statement in paragraph 33 of Sir Christopher Wormald's Third Witness Statement dated 29 March 2023, which says: "As testing expanded, the data on infection rates became more reliable and therefore more important". It is a fundamental principle of statistical analysis that to be able to draw worthwhile conclusions, a large enough sample size is needed; as testing expanded, it provided more reliable data on infection rates **(BD2/66 - INQ000144792)**.

333. Chapter 4 of the Technical Report for future UK Chief Medical Officers, government Chief Scientific Advisers, National Medical Directors and public health leaders in a pandemic covers testing data. It explains that, as testing expanded, data on infection rates improved as there were more detailed case rates by demographics and at lower-level geographies **(BD2/25 - INQ000203933)**.

334. This is explained further in paragraph 18 of the Statement to the Inquiry for Module 2, dated 25 August 2023, provided by Christopher Mullins, Director of Analysis and Chief Economist at the Department: "*For example, diagnostic testing capacity and testing rates*

in each pillar were initially limited; once available at scale, detailed case rates by demographics and at lower-level geographies were available to inform policy decision-making such as the allocation of areas to tiers and targeting of measures at the appropriate geography. Routine asymptomatic testing across institutions (such as schools, hospitals, care homes, homeless shelters and prisons) and sections of the population (such as school children and healthcare workers) gave more complete data from late 2020 onwards." **(BD2/306 - INQ000252722)**

335. Paragraph 30 of Christopher Mullin's Statement to the Inquiry for Module 2, dated 25 August 2023, sets out the following: "*To manage, interpret and communicate the data flows that were being established, new data-related functions were rapidly set up across the Department, initially drawing on existing staff. For example, I re-deployed analysts at the centre of the Department to provide briefings to ministers on COVID-19 and to support national media briefings and policy development. Similarly, a large proportion of routine analytical work on social care was paused to enable social care analysts to focus on COVID-19- related issues. Small analytical teams were put in place to support work on testing and PPE. I also worked with the Government Analysis Function to obtain some surge analytical staffing from across the civil service. Initially these functions were heavily resource-constrained; this eased over time as new analytical units became established and recruitment was undertaken.*"

Data Sharing

336. As a general rule, the Department did not provide data to others, but rather it was provided with data by bodies such as PHE and NHSE (see, for example, paragraphs 84 to 87 and section 3 of Sir Christopher Wormald's Third Witness Statement, dated 29 March 2023 **(BD2/66 - INQ000144792)** and Christopher Mullin's Witness Statement dated 25 August 2023 **(BD2/306 - INQ000252722)**. Supplementary questions about the collection of data are, therefore, best posed to UKHSA and/or NHSE.

337. The Department acted as the 'data controller' for personal data processed within the NHS T&T service. The types of personal data collected are set out in the following exhibit: **(BD2/307 - INQ000562674)**.

338. Research produces a substantial amount of data to be studied; during the COVID-19 pandemic, there was a global shift in research practices, with open access and pre-prints widely available from early on and experts able to review evidence as soon as it was

available. In March 2020, chief science advisers from 12 countries, including the UK, wrote an open letter to journals outlining their support for open access practices, building on experience of previous epidemics on sharing data **(BD2/308 - INQ000546870)**.

339. Similarly, in respect of forecasting/modelling, this was carried out by PHE and NHS T&T (prior to their functions transferring to UKHSA), by UKHSA (from October 2021 onwards) and by other groups (e.g. SPI-M-O). Queries concerning modelling are, therefore, best addressed to UKHSA or to those other groups. The Department used the product of the modelling work conducted by others throughout the pandemic, as set out in Christopher Mullin's Witness Statement dated 25 August 2023 **(BD2/306 - INQ000252722)**.

340. Paragraph 33 of Christopher Mullin's Witness Statement sets out that:

> *"In addition to quantitative and qualitative data sources covered above, the Department used a range of wider evidence. This included analysis, research and advice from academics and clinicians and emerging literature on the impacts of interventions. See section 2 for further detail on the assessment of impacts. As discussed elsewhere in sections 2 and 3, the Department had access to expert epidemiological modelling from SPI-M-O and SAGE, alongside engagement with HMT on what macroeconomic analysis and advice they were able to provide, as part of cross government processes. The Department saw macroeconomic analyses and scenarios from the Bank of England (BoE), the Office for Budget Responsibility (OBR) and others, which are reflected in the public domain. Where possible, the Department did consider both epidemiological modelling and economic analysis (see paragraphs 59-61), but it did not have access to models that integrated epidemiological and macro-economic systems simultaneously. Such modelling did not exist within Government, and could not have been developed to high quality within the timescales. Even from a conceptual point of view, my view is that, given the limitations of macroeconomic modelling, and the many parametric uncertainties, a combined macroeconomy/epidemiological model would not have provided a reliable basis for decision making."*

341. The Inquiry has already received detailed evidence for Module 2 concerning the decisions that were taken during the pandemic; those decisions were, as previously set out, guided by the science, which included the modelling evidence.

342. The following information on data sharing draws on the conclusions of a roundtable discussion held in the summer of 2022 about the NHS COVID-19 Data Store and NHS

National Data Platform, which NHSE launched towards the beginning of the COVID-19 pandemic. The roundtable brought together public servants, private companies and others involved in the project and was held under the Chatham House Rule: within this summary nothing anyone said is attributed to them or their organisation, unless they have asked for it to be. The research was carried out by the Institute for Government **(BD2/309 – INQ000576815)**.

343. To respond to the pandemic, the government commissioned NHSE and NHSX (which merged with NHS Digital in February 2022 to form NHSE's Transformation Directorate) to develop a solution that would provide those national organisations responsible for co-ordinating the response with secure, reliable and timely data – in a way that protected the privacy of citizens – so that they could make informed, effective decisions. This needed data from across the NHS, social care and partner organisations.

344. In March 2020, a joint team from these organisations and the Department came together to support the Secretary of State in issuing control of patient information (COPI) notices, which required that data was shared for purposes of Covid.2 The Secretary of State first issued COPI notices in March 2020 and they were renewed several times until June 2022.

345. Once the COPI notices were in place, the team built the NHS Covid-19 Data Store – a single repository of COVID-19 datasets needed to inform an effective response – on Microsoft Azure. This data was collected from a variety of sources, including NHS 111 online and call centre data, hospital admissions data, testing data and Covid-related deaths data. NHSE advised that none of the information in the Covid-19 Data Store could be used to identify any individual: identifiable information followed a strict de-identification process where it was anonymised, pseudonymised in line with guidance from the Information Commissioner's Office (ICO) or only made available in aggregate.

346. To facilitate access to the Covid-19 Data Store, a single 'front door' process – one interface – was set up to manage requests from those applying to access data or wanting to add data to it. Anyone requesting access to data had to be able to demonstrate an involvement in the COVID-19 response and show:

    a. the purpose – it had to be for COVID-19 purposes

    b. the type and amount of data requested, with justification – for example, explanations were necessary if anyone requested patient record level data

c. transparency – any data requested required a demonstration of how it would be transparently processed

d. the legal basis – the legal basis that supported the applicant to process the data

347. Although NHSE published details of the data involved and its ground for processing data, the National Data Guardian, a statutory body that advises and challenges the health system on its use of data, expressed disappointment at the time taken for greater transparency – specifically, a data dissemination register around how data was used and shared.

348. To provide a single or shared version of the truth about the rapidly evolving COVID-19 situation, data processed via the Covid-19 Data Store needed to be analysed to make it meaningful. This was the function of the NHS National Data Platform. Using Palantir's data platform software (Foundry), dashboards were created to give a live view of the metrics needed to track and understand the spread of the virus and the healthcare capacity available to deal with it. This information supported both national and local decision making.

349. Initially, 3 dashboards were developed. There was a strategic decision makers dashboard for senior national and regional officials; an operational dashboard for local organisations to make decisions for their local area; and a public dashboard to enable the public to understand the progress of the pandemic.

350. These were followed by a COVID-19 early warning system, which provided forecasts to anticipate where the virus might spread next and how that would affect health and social care services; Supply Chain 360, to manage the supply of critical equipment such as personal protective equipment (PPE), ventilators and oxygen supplies; and vaccination capability, to manage the COVID-19 vaccination programme.

351. The National Data Platform was instrumental in giving decision makers access to accurate real-time information. Using the dashboards developed in the Data Platform, decision makers could understand how the virus was spreading and identify risks to particularly vulnerable populations and in turn:

a. proactively increase health and care resources in emerging hotspots

b. ensure critical equipment was supplied to the facilities with the greatest need

c. divert patients/service users to the facilities that were best able to care for them based on demand, resources and staffing capacity

d. ensure fair and equitable uptake of COVID-19 vaccination

352. The register is available at www.england.nhs.uk/publication/data-dissemination-register **(BD2/310 - INQ000546920)**.

353. The government and the NHS enlisted the help of several private companies:

a. Microsoft supported technical teams to build the Covid-19 Data Store on Microsoft's cloud platform, Azure.

b. Palantir was contracted to provide Data Platform software for NHSE.

c. Amazon Web Services (AWS) provided the cloud infrastructure and technologies that underpinned the Data Platform.

d. Faculty AI helped develop some of the forecasts within the Data Platform, such as the early warning system.

e. NHS Arden and GEM Commissioning Support Unit (on behalf of NHSE) operated the single front door for data access requests. The NHS Covid-19 Data Store website also lists support from McKinsey and Deloitte to "support and help improve the Innovative Data Analytics capacity and capability". At its peak, NHSE estimates that around 400 people were working to support its Covid-19 Data and Analytics Cell, in the joint team created between NHSE, NHSX, NHS Digital and other arm's length bodies, and with consultants and contractors.

354. The Covid-19 Data Store and Data Platform were cited as a case study in 'Data Saves Lives: Reshaping health and social care with data', the DHSC's data strategy, in June 2022 **(BD2/311 - INQ000546923)**.

355. The lack of established and practised data sharing between the 4 UK countries was a barrier to building a UK-wide picture. When building data pipelines, the NHSE data teams did not have authority to do this beyond England, but they made their code available to other UK countries to enable them to use it if they wished.

356. Participants in the roundtable discussion drew out several key lessons and recommendations for government based on the Covid-19 Data Store and Data Platform experience. These included:

a. establishing methods for data sharing, and shared processes, which would provide clarity around the future of the data landscape and ensure collaborations can operate efficiently and confidently

b. introducing a legislative 'duty to share' during emergencies that could help make appropriate data sharing the norm rather than the exception

c. having greater openness within government (including having regular meetings, sharing best practice and being clear about organisational responsibilities, to help see what people are working on and avoid duplication) and outside (to foster innovation and collaboration)

d. maintaining public trust through aligning the sharing of personal data with society's values (for example, the Nolan principles) and people's expectations – the latter will require a blueprint from government for incorporating the public in setting the purpose and agenda for data sharing projects, and maintaining patient, service user and community engagement throughout the life of the projects

e. establishing a communication blueprint across the health system for the effective and efficient devolution of policies, guidance and communications around data

f. tidying up legislation (such as the Digital Economy Act 2017 and Data Protection Act 2018), since many difficulties around legal bases and information governance come from the way different Acts come together and sometimes contradict one another

g. having common geographies (that is, consistent and clear boundaries) for organisations in the health system, or at least raising understanding of the different geographies and types of local organisation and their needs, to make it easier to collate and provide data for them

h. supporting international collaboration to establish the mechanisms for full data sharing across countries in the event of a future pandemic (either a single,

global international registry or a federated network underpinned with clear mapping and standardisation)

Modelling

357. As stated above at paragraph 339, modelling was carried out by PHE and NHS T&T (prior to its functions transferring to UKHSA), by UKHSA (from October 2021 onwards) and by other groups (e.g. SPI-M-O). Queries concerning modelling raised are, therefore, best addressed to UKHSA or to those other groups.

358. Chapter 5 of the Technical Report on the COVID-19 Pandemic in the UK, a technical report for future UK Chief Medical Officers, government Chief Scientific Advisers, National Medical Directors and public health leaders in a pandemic **(BD2/25 - INQ000203933)**, published on 1 December 2022 and last updated on 10 January 2023, discusses the epidemiological modelling used for the COVID-19 pandemic and sets out the following findings:

    a. The way modelling was used, and its limitations, during this pandemic is illustrative of options in future pandemics and epidemics. From the second meeting of the Scientific Advisory Group for Emergencies (SAGE) that considered COVID-19, the Scientific Pandemic Influenza group on Modelling was put on an operational footing, as a subgroup (SPI-M-O) reporting exclusively through SAGE. This allowed for an expansion in the number of academics providing support to the government response and increased the diversity (of models, modelling approaches, data and assumptions used, experience, academic institutions) of the group, and for a wider range of observers from government departments and the devolved administrations to attend and understand the principles and evidence derived from modelling.

    b. SPI-M-O acted to draw together results and insights across the various individual models and the significant expertise and experience of its participants to provide a consensus position. This scientific evidence was then used to inform SAGE advice, which was then used to inform policy.

    c. Generally, SPI-M-O (and SAGE) took a UK-wide approach to COVID-19. As policy development considered different spatial scales and as the epidemic spread at different speeds across the UK, models that considered different

nations, regions or even smaller geographical areas became more and more useful. For example, in Northern Ireland case rates and variant spread often more closely matched the Republic of Ireland – as when it experienced a wave of the BA.2 variant ahead of the other 3 UK nations in early 2022. As the pandemic progressed, all 4 nations of the UK adapted their modelling approaches to take account of differing epidemiology and policy questions.

359. In Wales, modelling from 2 Welsh universities contributed to their response – this was commissioned by the Technical Advisory Cell and the outputs reviewed by the Technical Advisory Group

360. Modellers from both Scottish Government and a range of universities across the UK and further afield developed models for use in Scotland. Estimates and projections from these were used throughout the pandemic using Scottish-specific data and parameters. These were used to inform the Scottish response and fed into SPI-M-O cross-UK estimates. Cross-UK estimates in turn informed weekly updates modelling the epidemic in Scotland. Scottish modelling groups worked with SPI-M-O participants to develop specific modelling tools for Scotland – for example, on establishing local authority projections.

361. In Northern Ireland, a modelling group was established by the Department of Health and a lead modeller was brought into the Public Health Agency to produce modelling estimates rapidly using more locally relevant parameters. These were supported by academics and public health specialists. These were compared with SPI-M-O modelling to refine them and see where differences were arising, and were published as weekly summaries for the public in their R Paper

362. Dialogue between UK-wide and devolved administration modelling efforts continued throughout the pandemic, with SPI-M-O's individual academics or academic groups sitting on the above advisory groups, and providing what became standard products (nowcasts, short-term forecasts and medium-term projections) for the 4 UK nations where possible.

363. Modelling is considerably more robust when more than one model (ideally a minimum of 3) is considered and a consensus is built and agreed across a broad community. If the models give the same message, there is greater faith in the results. If they give different results, it is an opportunity to understand why and emphasises the uncertainty.

364. The consensus approach also acts as quality assurance, lowering the risk of spurious results due to coding errors or biases within an individual model. The modelling evidence provided as a consensus reduces the profile of the quantitative results and emphasises the qualitative insights.

365. A variety of different approaches and sensitivity analyses also allows for consideration of a problem from several different perspectives – for example, large complex transmission dynamic models may allow for a level of detail that is not possible from simpler models, or different structures might allow trends at, say, lower-tier local authority level to be investigated. Generating a consensus does take more time but leads to significantly more robust results.

366. Alongside consensus, diversity of inputs and approaches has enabled challenge which has been an important part of the process. This has come from within the committee itself in a rapid review process, from within government (while maintaining academic independence), and from external sources as analyses were released into the public domain and externally peer reviewed.

367. During the pandemic, some countries such as Denmark, the Netherlands and Australia drafted technical modelling expertise into governments, whereas the UK was almost unique in having modelling conducted externally but publicly available and informing government policies. In particular, the strength in depth of the UK's academic community was and remains a huge asset. COVID-19 has demonstrated the importance of the following factors:

    a. Effective policy-modelling dialogue: early in the pandemic, requests for modelling to SPI-M-O were framed in ways that focused on 'predicting the future' rather than considering what high-level insights and principles that modelling could provide. There was a risk that policymakers wanted and expected greater certainty than is possible from modelling, especially of future events. As the pandemic progressed, understanding grew of what infectious disease modelling can and cannot do. Combining this with an analytical coordination hub at the centre of government led to commissions becoming more appropriate (both in terms of content and timelines), with the roadmap out of lockdown being an excellent example of where appropriately tailored modelling requests led to invaluable evidence to support decision making. A government co-chair of SPI-M-O with extensive understanding of academic

modelling, as well as the government's strategic questions, also facilitated this open dialogue.

b. Diverse range of models and modelling groups: at the start of COVID-19, the larger SPI-M-O modelling groups were able to quickly flex resources to the pandemic, while smaller groups could not at the same pace. This made building consensus difficult as individual groups' results could not be subject to the same breadth of quality assurance from multiple contributors that became the norm later in the pandemic. As the pandemic progressed, smaller groups became more able to contribute, improving the resilience of the modelling community as well as the consensus process and diversifying the models available, and thus the insights available to government.

c. Focusing academic expertise appropriately: as COVID-19 emerged in the UK, many modelling groups were extensively involved in monitoring the epidemic, as well as modelling potential futures. As government started developing its extended capabilities in summer to autumn 2020, divisions of responsibility could become much clearer and allowed for better management of SPI-M-O's extensive expertise and for prioritising their time accordingly **(BD2/25 - INQ000203933)**.

International Comparisons

368. On 1 April 2020 the Department provided the Secretary of State with an overview of testing comparisons between the UK and other comparable countries in the early stages of the COVID-19 pandemic. This overview indicated that, as of 19 March 2020, the UK was conducting more tests than France, but fewer than Germany, with the UK performing an average of 749 tests per million inhabitants. It noted that, up until this point, the UK testing strategy had primarily focused on testing hospital patients, with key health workers only recently being tested as well. This was compared to the average testing numbers in South Korea and China (5,567 and 2,820 tests per million respectively), which were the result of an increased capacity and a more liberal and widespread approach to testing **(BD2/312 - INQ000562614; (BD2/313 - INQ000562619)**.

369. PHE circulated a rolling update on the international situation 3 times daily. The following exhibits provide examples of the update **(BD2/314 - INQ000546863; (BD2/315 - INQ000546864; (BD2/316 - INQ000106919)**.

The Early Warning and Response System (EWRS)

370. EWRS is a rapid alert system at EU level, designed to notify participating countries of serious cross-border threats to health. This confidential web-based system enables the European Commission and the designated competent authorities responsible at national level (called EWRS competent authorities) to continuously communicate and monitor such health development. The UK was still, at this time, party to the updates from the ECDC and the EWRS, despite having left the European Union.

371. EU countries can alert, share information and coordinate national responses to serious cross-border threats in a secure timely manner.

372. The European Commission owns the system, and the European Centre for Disease prevention and Control (ECDC) operates the IT platform. EWRS has been successfully used to alert, share information and coordinate measures in response to cross-border events of communicable diseases, with current and previous outbreaks managed, such as COVID-19, Mpox, pandemic influenza A(H1N1), Ebola, etc.

373. EWRS is a system for all threats, including biological, chemical, environmental threats and threats of unknown origin, such as extreme weather events, volcanic ash clouds, chemical spills or biological hazards such as biotoxins **(BD2/317 - INQ000546926)**.

374. PHE circulated notifications and guidance issued by WHO and ECDC on a regular basis. The first guidance in relation to COVID-19, dated 2 February 2020 and issued by ECDC **(BD2/318 - INQ000546865),** was targeted at hospital administrators and healthcare practitioners in EU/EEA Member States and the UK. An update was released on 12 March 2020 **(BD2/319 - INQ000300298)** for a target audience that also included long term care facilities.

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: 04 April 2025