Witness Name: PROF YOUNG
Statement No.: 1
Exhibits: TWO
Dated: 11 MAY 2023

UK COVID-19 INQUIRY

WITNESS STATEMENT OF PROFESSOR IAN YOUNG

I, Professor Ian Young, will say as follows: -

1. I, Professor Ian Young, Chief Scientific Advisor (CSA) to the Department of Health Northern Ireland ('the Department'), make this statement in response to the request from the UK Covid-19 Public Inquiry ("the Inquiry"), dated 15 February 2023 under Rule 9 of the Inquiry Rules 2006 (SI 2006/1838), requiring me to provide the Inquiry with a witness statement in respect of specified matters relating to Module 1.

2. The focus of this statement is my experience and views on pandemic planning and system preparedness ahead of the COVID-19 pandemic, including developments and changes during the course of the pandemic.

3. I have structured my statement to include the role and function of the CSA, pandemic preparedness, learning during the pandemic, and conclusions.

The role and function of the Chief Scientific Advisor:

4. I was appointed to the post of Chief Scientific Advisor (CSA) to the Department in November 2015. The CSA role is part time, with the total commitment equating to three days per week, and I report within the Department to the Chief Medical Officer (CMO). The remainder of my role is split between Queen's University Belfast (as Professor of Medicine) and Belfast Health and Social Care Trust (as a Consultant Chemical Pathologist and Director of Research and Development). During the COVID -19 pandemic the CSA

role became a full-time commitment from 23 March 2020 (following my return to work after a period of ill health) until early 2022.

5. In my CSA role, I have specific and exclusive responsibility for research and development. In executing this responsibility, I work closely with staff in the Public Health Agency's Health and Social Care (HSC) Research and Development Division and HSC Trusts' Directors of Research. In addition, I provide input and advice as required on a number of areas to policy colleagues in the Department, particularly in relation to genomics and rare diseases. I am also Head of Profession for the Healthcare Science Workforce (Chief Scientific Officer role). I had no specific responsibilities for pandemic preparedness and planning, which lay elsewhere in the Department. However, I did attend one session of Exercise Cygnus as an observer.

6. Prior to the COVID-19 pandemic, I spent most of my time as CSA on Research and Development. I had no involvement with pandemic preparations or planning. However, during emergencies, my role as CSA requires me to work closely with the CMO and other Departmental officials to provide scientific/medical/technical advice to the Health Minister, which also can form part of the Minister's advice to the NI Executive, to inform its decisions.

7. The NI Executive does not have a general CSA, meaning a CSA unattached to any specific government department or policy brief with overall responsibility for Government Science, although future recruitment to such a post is planned by the Executive Office. There are two Departmental CSAs in NI – one in the Department of Health (me) and one in the Department of Agriculture, Environment and Rural Affairs (DAERA). Each CSA has a specific policy brief and provides advice to their respective Ministers. The DAERA CSA and I are in regular communication on a range of issues. Advice is provided by each of us through our respective Ministers to NI Executive decision makers on request, but there were no requests for me to provide scientific advice to the NI Executive in the period following my appointment (in 2015) up to the beginning of the pandemic.

8. The DAERA CSA and I agreed that he would act as point of contact with the UK CSA Network, passing relevant papers to me. Northern Ireland is not large enough to have a CSA Network of its own. Requests that the DAERA CSA and I made, prior to the

pandemic, that we should both be part of the UK Network were declined by the UK Government CSA, on the basis that only one representative for each Devolved Administration was allowed. However, I meet regularly in a variety of contexts with Health CSAs from the other UK nations.

9. I lead and direct Health and Social Care Research through the Research and Development (R&D) Division of the Public Health Agency (PHA). The current R&D strategy [see Exhibit MMcB5004 INQ000183439] sets out the Department's commitment to support research, researchers and the use of evidence from research to improve the quality of both health and social care and for better policy-making. It identifies high-level priorities and delivery mechanisms, which were developed in consultation with a wide range of stakeholders. The R&D Division funds research infrastructure and a range of research programmes, and works closely with other stakeholders and delivery bodies in NI, UK and Ireland to co-ordinate activities. This allows a flexible response in response to policy needs and questions as they arise. In addition, research objectives feature in a variety of other Departmental strategies (for example, the Cancer Strategy and the Mental Health Strategy amongst others), and there are separate strategies for some professional groups (for example, social workers and allied health professionals).

10. In summary, therefore, in my CSA role I had no role and limited awareness in relation to pandemic preparation and planning prior to COVID-19, other than observer status at one session during Exercise Cygnus. However, from 22nd March 2020 I was engaged full time in providing scientific input and advice in relation to the pandemic until early 2022. This included establishing and chairing the Department's Strategic Intelligence Group and Modelling Group; participating in SAGE meetings and other relevant UK fora on behalf of NI; providing advice to the CMO and the Minister of Health; meetings with other NI Executive Ministers and officials from other Departments as required; attendance at and briefings to NI Executive meetings; participation in communications and briefings to the media, the public and other stakeholders.

Pandemic preparedness:

11. As discussed above, responsibility for pandemic preparedness lay elsewhere in the Department, and was not part of my remit, although I was aware in general terms of the

range of command structures (bronze / silver / gold) which were to be stood up as required. In addition, during the early stages of the pandemic I was absent from work on health grounds. I therefore have no direct insight into pandemic preparedness or how existing policies and plans informed the initial stages of the response in NI.

12. It is important to remember that Northern Ireland is by some distance the smallest of the UK nations, and that this is reflected in a smaller number of individuals in the Department covering the same range of policy areas as much larger numbers of individuals in the other nations. It is not possible for Northern Ireland to have direct access to local in-depth scientific expertise across the full range of areas relevant to a pandemic, and therefore it is particularly important that Northern Ireland is well connected to expertise in the other UK nations in relevant areas of science, pandemic modelling etc.

13. On returning to work in late March 2020, it appeared to me that Northern Ireland was closely linked into UK pandemic response activities, and was benefitting from learning and information which was being shared through a range of UK structures which had been stood up as part of the pandemic response. In addition, there were lines of communication through the CMO and the PHA to their counterparts in the Republic of Ireland (ROI). It was clear that bronze / silver and gold command structures in Northern Ireland were in place and functioning, although I had no direct involvement with them. In my experience there was close liaison between the Department and the PHA.

14. The general impression I formed was of a fast moving situation, in terms of spread of the virus, scientific understanding and policy, internationally, at the level of the UK and in Northern Ireland. Appropriate structures, as intended by policy, had been established and were functioning in Northern Ireland, and it was clear that a relatively small number of Departmental colleagues were fully engaged and under considerable pressure to cover a wide range of activities.

15. There were a number of areas where I felt that the scientific response could have been more efficient from a Northern Ireland perspective early in the pandemic. Firstly, early meetings of SAGE did not have full participation from Northern Ireland, although Northern Ireland (through the CMO) was aware of the main SAGE conclusions and advice. I participated fully in SAGE as a member representing Northern Ireland from late March

2020. Full participation in SAGE allowed a complete understanding of the range of views and weight of opinion expressed within scientific discussions, and also allowed the opportunity to ask questions of general relevance or specifically from a Northern Ireland perspective, and to express opinions. Northern Ireland participation in SAGE is not recorded prior to 29th March 2020, when I joined, although the minutes may not record the presence of NI Government observers and in this respect are incomplete. There was a Northern Ireland observer present at some meetings, who provided a read out for internal use in the Department. I think that full participation in SAGE meetings is of more value than just having observer status or access to minutes or other outputs and that in future full representation of the devolved administrations, as soon as SAGE is stood up, should be essential if health issues are involved, since responsibility for health is a devolved matter.

16. Northern Ireland did not have established capacity in pandemic modelling which could be immediately stood up at the outset of the pandemic. In the initial stages of the pandemic, Northern Ireland relied on UK modelling which was presented to SAGE. I established an NI modelling group at the end of March 2020 at the request of the CMO when I returned to work, and this group played an important role in informing NI policy as the pandemic progressed. UK modelling (which included modelling of the pandemic in NI by UK groups) was helpful, but generally lagged behind NI local modelling which used the most up-to-date data to inform advice to the Minister of Health and NI Executive.

17. At the direction of the CMO, core pandemic modelling capacity has now been established within the PHA and will be immediately available in the event of any future pandemic. I will continue to liaise with PHA modellers from a CSA perspective.

18. There was not initially any independent group of scientific experts to consider SAGE papers and outputs, the outputs of SAGE subgroups and other scientific papers and reports from an NI perspective and to inform scientific and medical advice to the Minister of Health and the NI Executive. In or about 27 April 2020 I established the Strategic Intelligence Group (SIG) for this purpose, and it met regularly and provided advice throughout the main stages of the pandemic. SIG included representation from the PHA, Queen's University Belfast, Ulster University and Cambridge University as well as the Department of Health, from a range of medical, scientific and other disciplines. The SIG

advice was important and helpful, and a similar group should be stood up at the start of any future emergency situation as discussed below.

Learning during the pandemic:

19. There was continuous learning throughout the COVID pandemic as a consequence of increased scientific understanding of the virus, its transmission, disease severity and development and persistence of immunity; increased availability of testing; improvements in pandemic modelling; improved understanding of individual and population behaviours and how they were influenced by modelling; development of vaccination; the impact of non-pharmaceutical interventions (including contact tracing and isolation) and novel therapeutic treatments. This is covered and summarised in the CMOs' Technical report on the COVID-19 pandemic in the UK, to which I contributed. I will not repeat this material here but will highlight some of the key areas which I think were of particular importance in the context of Northern Ireland.

20. As discussed above, the importance of NI specific modelling capacity was recognised early in the course of the pandemic, and played an important part in informing policy decisions. Modelling continued to evolve throughout the pandemic, as knowledge about virus transmission, immunity and the effectiveness of interventions accumulated. Modelling capacity has now been embedded within the PHA and will be immediately available in the event of any future pandemic or other relevant emergency.

21. Pandemic modelling is dependent on the provision of accurate and timely data, and the importance of this was recognised early in the course of the pandemic. A range of measures were put in place to improve the quality and timeliness of data during the pandemic, with close working between Trusts, the PHA, the Department's Information Analysis Division (IAD) and NISRA (The Northern Ireland Statistics and Research Agency). The Department has recently published a Data Strategy [Exhibit IY0001 INQ000183443] which includes the establishment of an HSC data institute, and Northern Ireland will introduce a new patient Electronic Health Care Record in the near future. There is increased emphasis on data acquisition and data flows within the PHA, and all of these measures will collectively help to ensure that data flows should be improved during any future pandemic. In terms of inequalities, one area which requires improvement is

coding of ethnicity within the Electronic Health Care Record. Due to inadequacies of ethnicity coding, it was not possible for us to analyse differential impacts of the pandemic according to ethnicity in our general population, although it is also important to note that Northern Ireland has a much smaller proportion of ethnic minorities than other parts of the UK. In contrast, we were able to look at the influence of social deprivation on various impacts of the pandemic.

22. As discussed above, I believe that it would be better for representatives from the devolved administrations to participate fully in SAGE meetings as soon as SAGE is stood up in an emergency. While advice from SAGE and SAGE subgroups is helpful, there is a need to consider the implications and applications of this advice specifically in the context of Northern Ireland. In the early stages of the pandemic, this was done principally by the CMO / deputy CMOs and me; SIG was helpful in allowing a broader range of perspectives to be formally considered, and consideration should be given to standing up a similar body at the outset of any future emergency situation. In this context it is important to remember that during the spread of an infectious agent, the island of Ireland tends to behave as a single epidemiological unit somewhat separately to Great Britain, as was apparent to a variable extent throughout COVID.

23. Virus testing capacity was a significant limiting factor which influenced policy decisions early in the pandemic and as testing capacity increased, and reliable lateral flow tests were introduced, a different range of policy decisions became available as the pandemic progressed. SARS-CoV-2 was a completely new virus, and testing capacity was limited initially, partly as a result of global shortages of reagents and consumables. This was partly addressed at an early stage by assembling a NI testing consortium, which included local Universities and DAERA laboratories. It is difficult to see how this issue could have been addressed more rapidly in the circumstances; however, in the event of another pandemic I believe that there should be greater emphasis nationally (and globally) on rapid expansion of testing capacity.

24. The Department sought to develop a contact tracing service from the beginning of the pandemic, through the Public Health Agency. Initial contact tracing was done on a case by case basis, and evolved as the pandemic progressed with the establishment of the Test, Trace and Protect service. I provided advice as to the number of contact tracers

who would be required in Northern Ireland, based on best international practice, although the PHA ultimately decided on a different and smaller model, employing fewer contact tracers. Contact tracing is most effective when the prevalence of an infectious disease and the number of cases are relatively low. The PHA maintained contact tracing throughout the epidemic; though at times of very high prevalence the efficiency of the service was reduced and the impact, in terms of reducing transmission, will have been minimal, the maintenance of the service was important in terms of public messaging and perception.

25. Rapid deployment of research infrastructure and capacity to support COVID research was an area of significant success during the pandemic, both nationally and in Northern Ireland. Northern Ireland researchers and patients participated in all of the major UK national studies, recruiting very well. Studies were approved with unprecedented rapidity in many cases. As research in other areas resumes following the pandemic, there is important learning from experience during COVID and new good practice which we are keen to maintain and embed. We are currently refreshing strategy in relation to research in health and social care, and learning from our experience during the pandemic will be incorporated in this.

26. During the pandemic, one of my main roles (along with the CMO) was to provide scientific advice not only to the Minister of Health, but also to the NI Executive and to other Ministers as required. Mechanisms for doing this evolved as the pandemic progressed; I had no previous experience of being asked to provide advice beyond the Department of Health during my tenure as CSA. From my perspective this worked well, as there were opportunities to answer questions and verbally explain some of the nuances of emerging / evolving science to aid Ministers in making decisions, and in particular to make clear the uncertainties involved in modelling and other aspects of the science. Ministers and other officials will be able to comment on the extent to which they found this helpful.

27. In general, as discussed above, I think that scientific advice from a health perspective was effectively conveyed to Ministers. It was less clear to me how scientific advice in other areas (outside my areas of responsibility) was captured and conveyed (Education, Economy etc) in the absence of CSAs in other Departments or any overarching NI Government CSA. Partly as a consequence of this, there was no overarching cross-

government scientific body where a wider range of scientific perspectives were brought together to provide consolidated advice. I am aware that the current Head of the Northern Ireland Civil Service is seeking to address this issue at present. In any future health-related emergency I believe that the Health CSA will be best placed to lead a cross-government scientific body on health-related advice, but that it is important to capture a full range of scientific perspectives covering the full range of policy considerations.

28. I played an increasing role in communicating scientific information and its implications to the public as the pandemic progressed, through written opinion pieces and press releases, participation in media briefings (with the CMO and others), radio and television interviews, and press conferences with Ministers. I believe that this was important in helping to provide scientific context for the range of policy decisions which were made at different time points. I think it is important to clearly explain the evidence base which informs policy decisions more widely in a clear and consistent way, and hope that the experience of the pandemic will help to ensure that this is something which is carried forward both in relation to future emergency situations and other areas.

29. In general Northern Ireland was very well connected to UK scientific advisory structures and fully participated in discussions throughout most of the epidemic after the first couple of months. However, representation of Northern Ireland interests with full participation was not always automatic from the outset of the pandemic. Inevitably, discussion was dominated by the position in England (or more broadly in GB), as was appropriate given the relative distribution of the UK population. Full integration was achieved in some instances – for example, appropriate attention was paid to the position of Northern Ireland in modelling by UK groups, where separate modelling for progression of the pandemic in Northern Ireland was established from an early stage. There were regular meetings with ROI officials, which were co-ordinated by the respective CMOs, in which I participated and which were beneficial in understanding transmission of the virus in our respective jurisdictions and the likely general direction of policy decisions, albeit that our role in each case was to give advice, and decisions were a matter for political representatives. These meetings were underpinned by regular meetings between PHA and their ROI equivalents. There was limited participation by ROI scientific leads in our joint meetings, but their advice was conveyed through medical colleagues. ROI colleagues were mainly connected to European networks, and we were mainly connected

to UK networks. We were able to share scientific insights emerging from our respective networks, but there was not the same degree of very close collaboration, which was a consequence of ways of working with UK colleagues in SAGE and its subgroups.

30. The COVID response placed very considerable demands on many staff within the Department, and more widely within the health and social care system, but in particular on a small number of individuals in senior positions. This entailed working extended hours, seven days per week with essentially no leave over a very prolonged period. The Department was able to co-opt additional staff in a number of key areas, but despite this demands on staff were excessive at times. Specifically with regard to scientific advice and support, we relied heavily on colleagues from outside the Department, including local universities and the Strategic Investment Board (SIB). SIB is a company limited by guarantee, whose sole shareholder is the Executive Office; the role of SIB is to help Northern Ireland Government plan infrastructure, deliver major projects, and manage assets. SIB staff have significant modelling expertise, which was repurposed to support the COVID response. Personnel from these organisations were made available by their employers to support our response, through participation in modelling work or participation in scientific advice structures. Our success in doing this reflects the willingness of individuals and employers to respond to an emergency situation, and also pre-existing good working relationships between the Department of Health and other organizations. On a personal level, my role as CSA within the Department is a part time one, with no deputy or any supporting infrastructure in the Department. This was addressed in a flexible way as part of the pandemic response, but I believe that more investment in scientific expertise and advice is required both in the Department and across NI Government.

31. With regard to the future and the principal developments in public health and epidemiology which should now be taken into account in preparing for a pandemic, several seem to me particularly important. Firstly, the potential for timely.automated data flows and epidemic modelling expertise to inform policy decisions should be developed and are currently being actively addressed through the PHA and the Department's Data Strategy. Secondly, there should be a focus on the ability to rapidly develop and scale up diagnostic tests, including genetic tests and pathogen sequencing to understand pathogen evolution and transmission. This is being addressed insofar as it is Northern Ireland specific through

the Pathology Network and related structures, but is also a national issue which is being addressed through the UK Health Security Agency (UKHSA). Thirdly, there should be acceleration of the vaccine development pipeline through the use of novel mRNA technologies, which is being addressed nationally / internationally. Fourthly, there should be attention paid to the evolution of a wide range of channels of communication to reach different population groups with information, a matter both for the Department and a wide range of other bodies.

Conclusions:

32. The comments above draw upon my experience as the Chief Scientific Advisor to the Department of Health in Northern Ireland from 2015 to the present day. As indicated, I had very limited involvement with or responsibility for pandemic preparedness and therefore am not in a position to provide informed comment on related issues. However, I worked full time on the pandemic response from late March 2020 and have therefore focussed on my experience and opinions related to this period.

33. I have sought to highlight the areas which I consider to be particularly important, and some of the measures which have been taken to ensure that the learning is firmly embedded to ensure a more resilient and prepared system in the event of a future pandemic or other emergency.

Statement of Truth

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

Personal Data

Signed: _____

Dated: _____11 May 2023_____