Witness Name: Nick Hopkins
Statement No.: 1
Exhibits: NH
Dated: 16 November 2023

UK COVID-19 INQUIRY

WITNESS STATEMENT OF NICK HOPKINS

In relation to the issues raised by the Rule 9 request dated 31 July 2023 in connection with Module 2a, I, Nick Hopkins, will say as follows: -

1. I am Nick Hopkins of the University of Dundee, Nethergate, DD14HN where I am a Professor of Psychology.

2. I have prepared this statement myself by reference to records and material provided to me by the Scottish Government. I have also received assistance from the Scottish Government Covid Inquiry Information Governance Division.

3. Unless stated otherwise, the facts stated in this witness statement are within my own knowledge and are true. Where they are not within my own knowledge, they are derived from sources to which I refer and are true to the best of my knowledge and belief.

4. References to exhibits in this statement are in the form [NH/number - INQ000000].

5. I have answered the questions put to me by the Inquiry to the best of my ability. Where I am unable to answer the questions posed, for example because the question relates to matters which fall outside my area of expertise or because the events I am asked about took place before I joined the Scottish Government's Covid-19 Advisory Group ("C19AG"), I have informed the Inquiry of this and the reasons why in accordance with the instructions outlined in the Rule 9 request.

Sources of advice: Medical and scientific expertise, data and modelling

Roles and responsibilities

6. I work at the University of Dundee where I teach and conduct research in Social Psychology. I was invited to join the C19AG (16 October 2020) and attended my first meeting on 19 October 2020. I participated in a total of 24 meetings until the C19AG ceased holding meetings. The C19AG did not make policy or make specific policy recommendations. Rather, it provided technical and scientific advice on the state of the pandemic that facilitated the making of informed decisions by policy makers. My interests as a social psychologist lie in the processes that shape people's understandings of themselves and their relations with others. In particular, I am interested in how these understandings are bound up with their membership of various groups. I have no medical or public health expertise. Nor do I have any expertise in clinical psychology or mental health. Accordingly, the relevance of my experience to the group was limited to issues concerning the ways in which people could be expected to make sense of the pandemic and the response to it. This was relevant for the communication process and the issues involved in public adherence to the various non-pharmaceutical interventions (NPIs) brought in to reduce transmission.

7. The last meeting of the group was held 3 February 2022. The minutes of this meeting explain that at this point in the pandemic the group would no longer meet. It was also explained that should the situation require meetings this would happen but otherwise where advice was needed it would be dealt with in correspondence. As it happened, I was unable to attend this last meeting with the result being that the last meeting I attended was held 11 January 2022. Papers continued to be circulated until the summer of 2022. The group was asked for advice concerning the development of the SG's Strategic Framework (email received 3 February 2022) and I responded in writing via email (9 February 2022) [NH/002 – INQ000282453].

8. At the time of my joining, the group already had wide-ranging expertise across many domains. These included many fields within the medical sciences (e.g., clinical, epidemiological, modelling), public health and social science. The social sciences were well represented by Prof Stephen Reicher (who was also a member of the Scientific Advisory Group for Emergencies ("SAGE") and its subgroup, SPI-B (the Scientific Pandemic Insights Group on Behaviours)) and the Scottish Government's Chief Social Researcher (Dr Audrey MacDougall who was the head of the Scottish Government ("SG") Covid-19 Corporate Analytical Hub). The social science input

from Reicher and MacDougall was significant. Reicher was able to bring a clear conceptual framework based on a wide-ranging understanding of social psychological principles relevant to understanding people's thinking and behaviour. Moreover, he was able to bring (and elaborate upon) information shared at SAGE, SPI-B. MacDougall was able to provide various forms of data concerning the social dimension to the pandemic (e.g. people's number of daily contacts, adherence to advice, well-being, etc.). A social science perspective was also brought through input from the Scottish Government's Chief Policy Advisor (initially, Professor Carol Tannahill, and subsequently, Professor Linda Bauld). My immediate impression of the group's functioning was, and remains, extremely positive. The meetings were very well chaired such that diverse disciplinary input and discussion was actively encouraged. I believe the social science input was well-received in the group and that this was reflected in the minutes of the meetings and advice to the SG before I joined (e.g., Advisory Group – 21 September 2020 - Adherence to COVID-19 Regulations [NH/003 – INQ000217897]). My impression is that policy makers valued this advice as being relevant to their decision-making.

9. Beyond my participation in the C19AG I had no other role in the SG advisory structure. I was not a member of any other forum (official or unofficial) relevant to SG policy. As I have no expertise in the medical sciences, epidemiology, modelling or public health, my contributions focused on the social science issues under discussions. With regard to how my role related to that of Reicher (who had been in the C19AG and SAGE, SPI-B for some time), we shared a common conceptual framework based on research in social psychology as to how people interpret their social environment (and act within it) from the vantage point of their various group memberships. With regard to my contributions I sought to draw upon my disciplinary understandings and consider the general lessons they held for the particularities of the Covid-19 experience. That is, I saw my role in the group as trying to think through the implications of this broad social psychological framework for understanding the bases for people's beliefs for the Covid-19 scenario and their potential responses across a variety of scenarios. As I was not a member of any other Covid-19 related group or network, I did not contribute information circulating in other networks to C19AG meetings (and such information was already provided by group members who were involved in various other networks and professional organisations). I did contribute to a paper circulated to SPI-B on the social psychology of negotiating compliance with one's friends and family (S0935 Developing the skills of compliance [NH/004 – INQ000282455]).

Principles/policy behind the use of medical/scientific advice in the Scottish-Covid 19 pandemic response

10. I believe SG policy was motivated by the desire to limit the spread of the virus and to limit/contain the various harms (direct and indirect) associated with infection and the other harms that arose from the response to Covid-19. More specifically, the SG identified four Covid-19-related harms: direct heath, indirect health, economic, and social impacts (see COVID-19: Framework for Decision Making Assessing the four harms of the crisis, Scottish Government, 11 December 2020 [NH/005-INQ000131028) . Inevitably this range of harms required that policy makers engage in a complex balancing of concerns and interests (including those associated with policy responses). Moreover, such a balancing had to be done in conditions of uncertainty (e.g., concerning the clinical outcomes of infection, how these varied for different groups, could have long-lasting effects, were contingent on virus mutation, vaccine efficacy, etc.). Whilst I cannot speak to the range of opinions expressed in the first months of the pandemic, I believe that throughout the period I attended C19AG meetings, the discussions of the (direct and indirect) health and social harms of Covid and those arising from the response to Covid-19 were wide-ranging (see, for example, minutes of meeting on 16 November 2020 [NH/006 – INQ000217976]). Sometimes discussions were guided by SG requests for advice. Often, they were guided by the group's membership and their concerns. Taken together, this meant the group provided SG policy makers with a broad appreciation of the key issues (and the quality of the evidence currently available) relevant to their policy deliberations. The group's remit did not include advising on economic issues.

11. The group received papers from SAGE and SAGE/SPI-B. This input was highly valued. Input from SAGE/SPI-B often provided information concerning the general principles and processes relevant to understanding people's behaviour. These principles (e.g., concerning the need to provide clear, coherent and actionable advice communicated through a relationship characterised by trust) have a general applicability regardless of context. Such social science advice was also repeated in the C19AG meetings: the group regularly discussed issues concerning the public's understandings the pandemic and the role of communication in shaping that understanding. This was associated with an emphasis on the importance of building a relationship with the public such that those seeking to build support for the response to Covid (e.g., NPIs, vaccine uptake) were seen to take public concerns and interests seriously. Moreover there was an emphasis on encouraging people to

think of themselves as members of a community with shared responsibilities to play their role in limiting infection transmission.

12. Whether the SG received bespoke advice concerning communication with Scottish audiences (e.g., bespoke advice on how to engage particular community identities in Scotland) I do not know (this may have happened through other channels). I believe it was appropriate to repeat the general message that members of the public would be more likely to trust those in authority if the former felt the latter engaged with their concerns in C19AG meetings and that its importance was recognised inside and outside the group. For example, see the minutes of the meeting of 3 December 2020 [NH/007 – INQ000217996] concerning the communication principles in relation to the vaccine programme. With regards to the degree this advice was followed, I believe the SG communications (e.g., the regular briefings given by the First Minister and the National Clinical Director) were excellent in terms of being delivered in a clear and straightforward manner that respected public concerns and anxieties.

Informal decision making and communication

13. I did not take part in any informal meetings outside of the C19AG relevant to SG policy-making. Nor did I participate in any informal discussions by WhatsApp or other messaging platforms. Moreover, I do not know if there were any informal discussion networks using such platforms that involved others in the group. In turn this means that I have no evidence to suggest that the quality of the group's decision-making and its recording could have been affected (and as note in paragraph 14, I believe the group's minute taking was excellent). The group did have a Slack facility which I was given access to when I joined the group. The name of the facility was 'NHS Scotland CMO Advisory Group' (or 'nhss-cmoag.slack.com'). My impression is that this often functioned as a forum where members could post recently published academic medical papers. Occasionally, it featured requests for group members to reflect and comment upon particular issues. Such input was then often discussed in the following C19AG meeting and could feature in advice to the SG. I do not believe the Slack materials have been retained. The main channel by which group members received documents for the C19AG meetings (e.g., the minutes from SAGE) was Objective Connect, which is a secure file sharing application used by SG. This was also the vehicle for disseminating the C19AG meetings' agendas and minutes. Occasionally, these documents were also circulated via email. I do not believe that email correspondence was stored.

14. The minutes were taken by the Secretariat. My understanding is that no digital records were made of group meetings (they were not recorded and information shared in the 'chat' facility of Zoom were not kept). I believe the note taking sought to capture the essence to what was said (rather than every word). In my judgement the publicly available minutes capture (very well) the topics discussed and issues of nuance and uncertainty. These minutes are publicly available on the SG website and record the presence of those in attendance. I understand that these minutes and the advice notes to the SG have been provided to the Inquiry by the Secretariat.

15. With regards to guidance concerning the use of various communication channels and the retention of any such communication I cannot remember receiving such guidance. However, the Terms of Reference (NH/008 – INQ000218232] for the group included a clause (clause 9) on confidentiality concerning information access and sharing. This stated that 'Information arising from SAGE is official sensitive and should not be shared outside of these structures. Any inputs shared with the group for discussion will be considered confidential and not for further sharing without written permission from its author.' As requested in the invitation I received to join the group, I confirmed I would adhere to this. I believe this policy was adhered to by all members of the group.

Scottish Government Covid-19 Advisory Group (C19AG)

16. I cannot speak to the range of advisory units inputting information and data to SG policy makers beyond the C19AG. However, with regards to C19AG and its remit, I believe the range of expert advice available to the SG was broad and sufficiently representative of the medical sciences (clinical, epidemiological, modelling), public health, and social sciences. Moreover, many of these group members participated in other groups (e.g., SAGE, various professional networks, etc.) and were therefore able to draw on insights arising in discussion taking elsewhere. In addition, several C19AG members chaired sub-groups (e.g., covering education and children, universities and colleges, nosocomial infection) and the C19AG agenda was such as to allow these to routinely report on the issues discussed in these sub-groups. I am also of the opinion that the overlap between members of SAGE and the C19AG brought benefits. Group meetings were typically held shortly after SAGE meetings which meant that the former could draw upon the latter: not only were minutes available but members could elaborate on the issues involved. The organisation, personnel and remit of C19AG strikes me as entirely appropriate and the group functioned well with members free to contribute to the discussions without constraint.

17. With regards to whether there could have been advantages in having a different structure (e.g., bringing together expertise in relation to the economy, education, social care and public services) to assimilate advice, I believe that such a structure could have resulted in the advisory group becoming increasingly involved in policy formulation and that such a scenario would be problematic in terms of accountability. On this, I think that it is important (in accountability terms) to separate the provision of scientific and technical advice concerning the pandemic from policy formulation and that the structure adopted worked well in this regard. Specifically, the group was able to offer advice as to understanding the unfolding/developing scenario with a focus on information about transmission rates, virus mutation, vaccine efficacy, public understandings of the situation, etc. that the SG could then weigh alongside information/advice relating to other domains (e.g., the economy) to make policy decisions for which they are accountable to the public.

18. My participation as a member of C19AG was limited to the meetings I attended. I did not interact with Public Health Scotland ("PHS"), local health boards, local authorities, Primary Care services, or the independent sector. Beyond being aware that some members of the group had various professional roles, I do not know how the group communicated with such bodies. I had no personal or working relationships with ministerial decision makers. Nor did I have any involvement in providing advice to Cabinet meetings, the Scottish Government Resilience Room ("SGoRR") and the Four Harms group (and I have no knowledge of how the group functioned in that regard). Ministers did occasionally join C19AG meetings and group members took part in 'Deep Dive' events with the First Minister and senior SG personnel. My impression of these meetings is that they functioned very well. They were cordial, well-organised, and allowed thoughtful explorations of nuance and complexity. Beyond this I have no knowledge of the working relationships between those involved in the C19AG and Ministers.

19. In terms of advice, the focus was upon information relating to community prevalence, estimates of transmission rates (and their trajectory), the significance of virus mutation (for clinical outcomes and transmission), vaccine effectiveness, etc. Such advice was expressed with due regard to the uncertainty surrounding the evidence base. Particular contexts (e.g., schools, universities and colleges, hospital settings) were subject to detailed review (via sub-group reports). There was attention to the role of NPIs in limiting transmission in various social contexts (e.g., in the workplace, in domestic settings), advice on travel, and explorations of the lessons available from international comparisons. There was discussion of the various harms

arising from the pandemic and the response to it. More generally, there was advice on the principles underlying effective communication concerning risk and the management of risk.

20. The Chief Medical Officer ("CMO"), Deputy Chief Medical Officers ("DCMOs"), Chief Scientific Adviser ("CSA") and PHS staff were regular participants in the group's discussion and in formulating the advice going to the SG. I am not aware of significant differences of opinion arising between these figures and other members of the C19AG. The group's discussions were thoughtful and conducted in a manner that was alert to the quality and quantity of the evidence base. I am not aware of any dissent in the area of my own expertise where there was close agreement on the relevant social psychological principles and the issues relevant for policy makers. With regards to other areas of discussion, there could be a range of judgements expressed. Typically, this was because the relevant evidence bases concerning infection rates, viral mutations, etc. were only gradually emerging (and SAGE documentation often noted the degree to which one could be confident about the interpretation of certain evidence). Inevitably, such uncertainty as to the evidence base meant that interpretation and discussion was required. Although diverse issues were addressed and many areas of complexity and nuance noted, I am not aware of substantive issues that split the group. Where there were differences in interpretative emphasis in relation to the meaning of the available evidence, these were recorded in the minutes appropriately. See for example, the minutes of the meeting held 30 December 2020 [NH/009 – INQ000218023] where the difficulties in judging the Kent variant's transmissibility (and hence varying judgements of its threat) were noted. See too the minutes of the meeting of 15 April 2021 [NH/010 – INQ000218144] where the significance of actions taken in April for the autumn months (when there would be greater indoor transmission) were subject to different judgements. I believe the discussion had focus such that information overload was avoided. In turn, I believe that the group was effective in terms of communicating the evidence base as it related to issues of infection transmission and how it could be limited through vaccination and NPIs to policy makers. Inevitably, it was for policy makers to integrate such information with other materials arising through other channels.

21. Given the challenges of advising in a context where the scientific and technical evidence was emerging and provisional, the decision to focus on the "centre ground where there was most confidence and agreement" (as outlined at paragraph 40 of the fourth witness statement of the Director General for Health and Social Care [NH/011 - INQ000215470] made good sense. It helped ensure the information and

advice was based on the strongest available evidence at the time and was transparent and clear.

22. Advice from the group was communicated in written form. Copies of the written advice to the SG were circulated via Objective Connect. I judge this advice to have been presented clearly with a focus on the scientific and technical evidence available at the time. I believe the formulation of this written advice to the SG was appropriate in terms of scale and nuance. Where appropriate, the quantity and quality of the evidence base was noted. The group's regular agenda (see paragraph 24) meant that certain issues of relevance to policy makers (e.g., the incidence of infection, developments in transmission rates, virus spreading in schools and hospitals etc.) were routinely discussed. In turn, the implications of such issues for understanding the state of the pandemic and its development featured in the advice provided to the SG. That is, the group was able to communicate evidence to the SG on issues that the group membership had highlighted. In addition to these regular agenda items, the group was sometimes asked for information of relevance to particular policy issues. One example was the request for advice in relation to how 'vaccine certification' (which could be used to regulate access to mass gatherings) could be interpreted by members of the public (see minutes of meeting 27 May 2021 [NH/012 – INQ000218160] and also Advisory Group – 22 June 2021 - Advice on certification [NH/013 – INQ000218173]). I believe that the group's ability to both raise issues that it considered important and respond to specific SG requests meant that advice on a broad range of issues was provided to the SG and this was not constrained by concerns as to what policy makers considered palatable. I also believe that the advice was effectively communicated. The emerging evidence relating to incidence and transmission was presented with appropriate caveats (see paragraph 20). So too the emerging evidence in relation to mitigation measures was presented clearly.

23. With regards to the reception of C19AG advice, members of the group who worked with policy makers often commented on the latter's positive regard for the C19AG input. Moreover, the First Minister and Cabinet Secretaries had opportunities to explain the utility of this advice (e.g., at the Deep Dive events or when joining C19AG meetings). Such meetings also provided opportunities for such office-holders to pose questions to the group. I am not aware of data or advice that the SG should have asked for and did not (and the group was proactive in raising issues it considered important). Inevitably, how group advice on the scientific and technical evidence concerning health risk mitigation was factored into policy making would be shaped by other relevant evidence/advice (e.g., concerning the economy, policing,

etc.) that SG policy makers would receive via other channels. As the group did not make policy recommendations but rather provided an evidence base concerning a particular (health-related) domain to be considered alongside others, I do not know how such a 'factoring in' of C19AG advice worked in relation to particular SG decisions.

24. The agendas were formulated by the Chair and Secretariat and typically opened with an evidence-based update on the levels of infection in Scotland (e.g., regional differences, the changing incidence of the different variants of the virus, etc.). This would be followed by an update on the evidence-based discussions taking place at SAGE, and a review of the international picture (in terms of incidence and response). In turn, these discussions were followed by reports from the sub-groups dealing with education and children's issues, universities and colleges, hospital acquired infection and testing. Sometimes members of the group would present relevant findings from their own research. For each item of business, there were opportunities to ask questions. There were also opportunities to introduce/raise other issues. As noted above (paragraph 8), the group had a wide range of expertise. With regards to whether epidemiology and modelling were too prominent (compared to say work in clinical medicine or public health) in our discussions (and advice) I cannot judge. I am however confident in saying that the group's expertise was wide and deep and that the overlap with membership of other networks and sub-groups was a strong feature in terms of bringing in a wider disciplinary and professional framework such that a variety of approaches and perspectives were aired.

25. I am not aware of any external review/peer review of the group's breadth of expertise or the way in which the group functioned so as to avoid so-called 'groupthink'. However, in relation to the characteristics associated with the concept of 'groupthink' (e.g., a narrowed investigation of issues arising from a directive leadership, pressures for conformity, etc.) I would repeat my earlier observations that the C19AG's meetings were extremely well chaired with contributions from a wide range of perspectives being invited/encouraged. Moreover, members often asked questions of those from other disciplines such that complexity and nuance in evidence and interpretation was explored. The Chair would regularly summarise the ongoing discussion and note areas of uncertainty and nuance. In addition to distilling the essence to the discussion, such summaries provided opportunities for members to clarify their points.

26. The fact that the C19AG had a membership that spanned a variety of professional domains and had sub-groups devoted to particular groups of concern (e.g., children, hospitalised patients) meant that a variety of direct and indirect medical and social harms were regularly discussed. More generally, there was discussion of the ways in which the elderly, those from ethnic minorities, those experiencing poverty, etc. were particularly vulnerable to infection (and likely had pre-existing health conditions). Moreover, there was regular discussion of the ways in which Covid (and the response to it) accentuated pre-existing inequalities (for example, those living in deprived communities may have less readily available forms of social support than those in more affluent areas). The significance of not underestimating the impact of the less visible chronic harms arising from Covid was discussed (see for example, the minutes of the meeting on 16 November 2020 [NH/006 – INQ000217976]). The question of how such harms (and others – e.g., concerning the economy) were to be weighed and balanced in developing policy was an issue for SG policy makers rather than the group.

27. The C19AG did not have a patient group representative. Some members of the group worked in hospital settings. I am unaware of if (and how) the SG received input from patient groups. With regards to the way the group worked with other bodies, I do not know if/how it relayed information from the SG to SAGE and SPI-M/SPI-O/SPI-B or how the C19AG or SG liaised with local authorities.

28. Data were made available to the group via several routes. Members of the group received data and reports via Objective Connect (e.g., Office of National Statistics (ONS) data, reports from SAGE and its sub-committees, links to academic papers, and reports from the International Comparators Joint Unit). Data were effectively communicated. Often data were numeric (e.g., estimates of transmissibility, or case frequency) and were accompanied with interpretative/contextualising text. Data were also available from the Scottish Covid-19 dashboard which provided information on infection cases according to geographical location. The group also received verbal reports by members of the group involved in ongoing research projects (e.g., concerning the changing prevalence of the different variants over time). Again, this facilitated the effective communication of data (it was up-to-date, clearly explained, and often prompted discussion).

29. Data concerning people's behaviour were available via the Covid-19 Scottish Contact Survey and the group received summaries on such behaviour and people's (self-reported) adherence with restrictions on social contact from Dr. Audrey

MacDougal (SG COVID-19 Corporate Analytical Hub). The available evidence suggested adherence was good but it should be noted that gauging adherence is difficult: it entails self-report data and such data are subject to several factors that impact their validity (e.g., selective memory, self-presentation concerns etc.). The group received information as to potential future scenarios from the SG COVID-19 Corporate Analytical Hub. These scenarios were based on different assumptions about vaccine efficacy and NPI adherence. They ranged from a scenario in which immunity reduced hospitalisations and deaths to low levels through to scenarios in which a new variant immune to the vaccine increased hospitalisations and deaths. Other scenarios envisaged futures where vaccine effectiveness waned or where adherence with precautionary measures was reduced amongst some. Such scenarios (even if they were judged to be unlikely) were very useful in prompting discussion. In turn, this helped widen debate and the testing of assumptions. I am unaware of assessments examining how adherence with Covid-safe measures (e.g., mask wearing, hand-sanitisation) would have been affected by the avoidance of more restrictive measures (such as 'lockdowns').

30. International comparisons were a regular agenda item (see paragraph 24 and 28) and the group received input from the International Comparators Joint Unit (via Objective Connect). The group also received information on other nations' transmission levels and approaches (e.g. in relation to vaccine passports, see minutes of meeting, 4 March 2021 [NH/014 – INQ000218102]). I thought this combination of international information and experience worked well in terms of widening the terms of the discussion.

31. With regards to how the resourcing or the funding of the advisory structures were consequential for the gathering of data relevant to the C19AG's discussions, I have no information on which to base a judgement. Nor do I know how resource and funding considerations fed into policy decisions (e.g., decisions as to the availability of free testing, decisions as to the amount of support available to people to adhere with NPIs, etc.). Issues of funding and resourcing were matters for SG policy makers rather than the advisory group.

32. The devolution settlement impacts the SG's powers across a variety of domains. With regards to the C19AG, the most significant feature of the settlement was the relevance of the border with England for travel (see Advisory Group – 29 January 2021 - Advice on Borders and Travel [NH/015 – **INQ000218068**). I do not know how the devolution settlement shaped working relationships between the SG's and UK's

public bodies. Nor do I know how the C19AG / SG liaised with local authorities on restrictions relating to their areas.

33. I believe the procedures for communication with the SG were fit for purpose. The group reported to the CMO (who was also in regular attendance and thus able to hear the discussion and invite clarifications). Not only were the minutes available, but the Secretariat periodically produced advice papers (with input from the group) on specific topics relevant for SG policy makers. I cannot identify improvements with regards to the scrutiny (internal or external) of the group's functioning and its ability to present evidence in a balanced and clear manner. With regards to concerns about ministers / senior civil servants and their abilities to understand and use medical, scientific and social scientific evidence, I have no concerns whatsoever. I was genuinely impressed with their understandings of (and abilities to work with) information and evidence associated with different disciplines. I had no interaction with counterparts working at a UK level and so cannot comment on their performance.

Testing

34. As I have no understanding of the scientific and technical issues involved in testing, I cannot comment on the advice given to the SG and their test and trace strategy (launched several months before I joined the group).

Decisions in relation to non-pharmaceutical interventions (NPI).

35. By the time (19 October 2020) I attended the C19AG, the broad contours to the response to Covid-19 were already well-established. I have no insights into the group's advice concerning the national lockdown (March 2020-July 2020) but I am aware that the group had provided advice to the SG on such issues as face coverings (Advisory Group – 12 June 2020 – Advice to the Cabinet Secretary on facemasks [NH/016 – INQ000217681]) and mass gatherings (Advisory Group – 1 July 2020 - Advice on Superspreading [NH/017 – INQ000217729]) which predate my membership of the group. Reducing people's social contacts through working from home, limiting access to certain venues (e.g., shops, nightclubs, mass gatherings), reducing people's travel, wearing face-coverings etc. had potential to limit transmissibility and help contain the wider impact of the pandemic on society and the capacity of the NHS. Judging the impact of such measures at the time was difficult. One reason is there is a lag between policy implementation and case numbers. Another is that the spheres of social life are interconnected such that it is hard to identify which measure is key in delivering any effect (e.g., restricting access to

leisure facilities not only impacts the transmission inside such venues but likely impacts transmission associated with travel). Furthermore, judgements on the effectiveness of such measures were complicated by the development of new variants (which were more transmissible). However, I believe such measures were important elements of the strategy to contain the spread of the virus – especially as the process of developing and rolling out a vaccine required time. Recent analyses confirm the value of such interventions (The Royal Society (2023) COVID-19: examining the effectiveness of non-pharmaceutical interventions [NH/018 – INQ000282456]). There was consideration of the negative effects of such interventions and the public's likely adherence over time. As could be expected, clear data on such issues were limited. Although these measures involved considerable changes to people's daily lives and prompted questions about likely adherence levels, the wider social psychological literature suggested that good levels of adherence were possible if the reasons for such restrictions were explained and adherence modelled by public / authority figures (see Advisory Group – 21 September 2020 - Adherence to COVID-19 Regulations [NH/003 – INQ000217897]). How the harms associated with various NPIs were to be weighed in relation to their benefits was a judgement made by the SG on the basis of a wider range of evidence (including that concerning the economy, policing, child and adult protection, etc.).

36. During my membership of the group there was repeated discussion of the identity of those most at risk of Covid-19, the risk of asymptomatic transmission, the risks associated with Covid-19 being airborne, and the risk of long Covid (e.g., see Advisory Group – 21 January 2021 – Long Covid Evidence Summary [NH019 – INQ000218041]). In relation to each of these, the evidence base was partial and subject to evolution. With regards to my own understanding of these issues, I became aware of the complexities that this partial and evolving knowledge base posed for risk communication. For example, with regards to asymptomatic transmission, if people feel well, it becomes harder to impress upon them the potential for them to be a risk to others. So too, if the full health consequences of Covid - 19 only become clearer after some time (as in Long Covid) it can be hard to dispel erroneous perceptions that the health impact of Covid is minimal (e.g., "just like 'flu"). With regards to my evolving understanding of Covid-19 being an airborne disease, I learned the importance of ventilation. In turn, I appreciated the complexity of ensuring ventilation is adequate: people do not always have control over the degree to which a space is ventilated. Often this comes down to issues of building design. In other scenarios (as when people visit another's house) the process of

increasing ventilation (e.g., opening windows) can be complicated by issues of etiquette (especially if the weather is cold).

37. With regards to SG policy on school closures, the C19AG had a separate sub-group that addressed the many issues (e.g., health, welfare, educational) involved. I was not a member of this sub-group but it reported regularly to the C19AG where there were ongoing discussions about the need to balance the potential gains in controlling the virus through school closure against the health, educational and social harms such closure entailed. These issues were revisited throughout the pandemic (see paragraph 42).

38. Group discussions made regular reference to the ways in which pre-existing inequalities (economic, health and social) were likely exacerbated by Covid and the response to it. For example, there was an awareness of the increased risk faced by those living in multi-generational and multi-family housing (where the elderly could be particularly vulnerable as social distancing was more difficult). There was also an awareness of the difficulties faced by those with lower incomes (for whom the opportunities to work from home were reduced). The particular vulnerabilities of ethnic minorities were communicated to the SG before I joined the group (see Advisory Group – 26 June 2020 - Submission on reducing risk and improving outcomes from COVID19 for minority ethnic and religious communities [NH/020 - INQ000217727]) and repeated in the group's meetings I attended (see minutes of meeting on 16 November 2020 [NH/006 – INQ000217976]). Such discussions included reference to the support (social and material) that could help the vulnerable (and facilitate adherence to Covid-safe measures). This advice to the SG was already in place before I joined the group (see Advisory Group – 21 September 2020 - Adherence to COVID-19 Regulations [NH/003 – INQ000217897]) and was rehearsed during the meetings I attended. As the group was not involved in formulating policy, I cannot answer how it informed policy deliberations and decisions. Nor do I know how the SG communicated with vulnerable groups.

Decisions relating to the period between 7 September 2020 and the end of 2020

39. As I only joined the C19AG 19th October 2020, I am unable to comment on advice provided by the group before that date as I was not involved in those discussions. Accordingly I do not know the background to the five-tier COVID-19 system (23 October 2020) or the nature of any discussions relevant to a potential 'circuit breaker' in September 2020 or a parallel lockdown with that adopted in England (31 October 2020).

40. With regards to the period before the end of 2020, the approach of the winter holidays prompted discussion of the risks associated with people travelling to be with family and the risks associated with increased indoor contact and socialising (e.g., minutes of meeting held 02 November 2020 [NH/021 – INQ000217959]). The group recognised the importance of these holidays and noted that whereas scaling restrictions down over a longer holiday period (two weeks) could trigger a sharp rise in infection, scaling restrictions down over a shorter period presented a smaller risk. Moreover, to the degree such a scaling down was judged respectful of people's concerns to celebrate the holiday period, it had potential to enhance compliance for the remainder of the holiday period. This period also saw discussion of new variants (e.g., the 'Kent' variant) (minutes of the meeting held 16 December 2020 [NH/022 – INQ000218000] and 30 December 2020 [NH/009 – INQ000218023]) and the C19AG reviewed evidence concerning its increased transmissibility (based on evidence coming from SAGE, SPI-M and NERVTAG – New and Emerging Respiratory Virus Threats Advisory Group). The potential for a significant escalation in infection transmission prompted discussion of the potential impact of increased transmission on NHS capacity. Although there was uncertainty as to the precise reasons for the Kent variant's transmissibility (e.g., uncertainty as to whether the evidence revealed information about the virus's intrinsic properties or changes in people's behaviour) there was a clear concern that control of the virus was vulnerable. Such concerns were clearly communicated (see the minutes of the meetings noted above).

41. With regard to lessons from this period I became aware of the difficulty of judging whether changes in infection transmissibility were an integral feature of the new variants or arose instead from changes in people's behaviour (e.g., reduced adherence with NPIs). Another lesson concerned the interconnections between different social contexts. For example, the issue of virus transmissibility associated with schools was likely impacted by people's behaviours outside the school. For example, when schools were open there was not only increased pupil-pupil interaction but also increased parent social activity (e.g., travel to and from school, meeting other parents etc.). More generally, I was increasingly aware of the complexities involved in balancing various harms (e.g., the harms associated with infection and the harms involved in limiting mixing with family and friends in the holiday period). Moreover, it was likely that getting the balance right would be important for future adherence.

Decisions relating to the second lockdown (January 2021 to 2 April 2021)

42. The period January 2021 to 2 April 2021 was marked by concern over the potential for new variants to develop quickly which could be more transmissible and evade the protection provided by vaccination. The speed with which mutation could occur and the potential for new variants to be brought in from outside were particularly prominent issues. This raised significant concerns with regard to the winter holiday period (see paragraph 40). This was related to the potential for increased transmission due to indoor mixing of a variant that itself appeared to be more easily transmitted. At the same time there were questions about the degree to which an increase in indoor mixing could be avoided given people's understandable wishes to gather with family members etc. One merit of relaxing the restrictions briefly was that it could go some way to satisfy people's wishes to gather and thus help maintain adherence levels longer-term (see paragraph 40 and 41). The question of how to balance these concerns (and manage an anticipated upswing in post-Christmas transmission) was for the SG to decide. In terms of managing people's expectations in relation to the winter holiday period, I believe the policy adopted (a modest relaxation followed by a tightening of restrictions on 26 December 2020 and 4 January 2021) was a reasonable way to manage the situation. In relation to this it is relevant to note the time lag between infection and a positive test result such that evidence about any potential wave is likely delayed and requires a precautionary approach based on such an awareness. Throughout this period, the issue of schooling (and the inequalities resulting from school closure) continued to attract attention. Again, the group emphasised the need to weigh the medical and social harms incurred in any action around schooling (minutes of the meeting held 30 December 2020 [NH/009 – INQ000218023] and 28 January 2021 [NH/023 – INQ000218067]). Inevitably, the decision as how best to weigh these harms was to be judged by policy makers in the light of all the other advice they received.

43. As I have no medical knowledge. I am not in a position to judge the Great Barrington Declaration (October 2020). As I was not a member of the group when the 'first lockdown' was implemented and reviewed, I am not in a position to comment on any specific lessons from that period relevant to decision-making in relation to the 'second lockdown'. However, my general impression is that given the time lag between infection and positive test results, one lesson was that rather waiting to see what emerged from the winter holiday mixing, it was appropriate to act quickly and firmly after the (brief) holiday-related relaxation of restrictions.

44. This period saw discussion of the need to plan for a gradual and cautious programme in which more restrictive measures were relaxed (especially as there

remained significant concern about transmissibility levels remaining high: see minutes of meeting on 18 February 2021 [NH/024 - INQ000218087]. Inevitably, the priorities and mechanism (including criteria) for gradually lifting restrictions was for the SG to formulate. In relation to this, one lesson from the first lockdown was that lifting restrictions requires care as the process can convey the impression that all risk is over and that normal everyday routines can recommence as before. Phasing the relaxation of measures brought in to stem transmission allowed for i. the continuation of risk to be communicated and ii. an ongoing monitoring of changes in practice such that if infection grew rapidly in response to the phased relaxation of restriction (a particular concern given the emergence of new and potentially more transmissible variants), then policy could be modified as appropriate (minutes of meeting on 18 February 2021 [NH/024 – INQ000218087] and 18 March 2021 [NH/025 – INQ000218117]).

45. One lesson arising from the period reviewed here concerns the difficulty of judging the risk posed by a new variant. For example, advice on the risks posed by a new variant (such as the Kent variant) was complicated by uncertainty as to the reasons for its transmissibility (such as whether higher transmissibility rates were integral features of the virus or reflected people's level of adherence with the guidelines, etc.). If the former, then the challenge posed by the new variant was greater. In turn, such uncertainty presented policy makers with particular challenges. With regards to the lessons of the 'second lockdown' I believe we learned that a phased lifting of restrictions is possible. Such a phased lifting allowed time in which evidence as to the impact of each step on transmission rates could be observed (and if required, stricter restrictions re-introduced). My impression (and it is simply an impression) is that members of the public appreciated this logic.

Decisions relating to the period between April 2021 and April 2022

46. Throughout this period there was ongoing uncertainty as to the risks from new (actual and potential) variants of the virus. Of particular note was uncertainty in relation to a particular variant's transmissibility (Delta), including the degree to which vaccines were effective against it. Such uncertainty prompted discussion as to the further easing of measures to control viral spread and the importance of considering the pressures on NHS capacity (see minutes of meeting on 10 June 2021 [NH/026 – INQ000218169]). As data became available concerning regional variation in infection rates and the risks associated with activities in different sectors of activity, it was possible for policy makers to develop more nuanced (region-appropriate and sector-

appropriate) policies. One merit of such an approach was that it could allow a more localised approach to balancing different health, social and economic harms. The group did not provide advice on how to weigh such issues or develop a more differentiated locally-relevant policy and I do not know the bases for particular SG policy judgements (which could reflect many different concerns). The group continued to note the importance of considering the well-being and educational needs of children (minutes of the meeting held on 10 June 2021 [NH/026 – INQ000218169]) and to report on the developing scientific and technical evidence in relation to virus mutation and emerging variants of concern (minutes of meeting on 13 May 2021 [NH/027 – INQ000218153], 10 June 2021 [NH/026 – INQ000218169], 27 May 2021 [NH/028 – INQ000218160]), and international examples of virus control strategies (see minutes of meeting of 15 April 2021 [NH/010 – INQ000218144]). In addition to offering advice on the issues involved in vaccine certification (Advisory Group 22 June 2021 - Advice on Certification [NH/013 – INQ000218173]), the group offered advice on the process of managing the relaxation of NPIs (see minutes of the meeting held 15 April 2021 [NH/010 – INQ000218144] and Advisory Group – 14 May 2021 - Advice on relaxation of NPIs [NH/029 – INQ000282457]). With regard to the process of relaxing NPIs there were various complexities of note. One concerned the advantage of maintaining NPIs to allow more people to get vaccinated. Another concerned the risk that people could believe vaccination rendered NPIs unnecessary (when, in reality, a combination of interventions was most effective).

47. The development of the Omicron virus and its potential to have a significant impact on infections rates (with a short doubling time) and impact the NHS's capacity was discussed in December 2021 (minutes of meeting, 2 December 2021 [NH/030 – INQ000218231] and 9 December 2021 [NH/031 – INQ000218239]). Significant concerns were expressed about its quick doubling time and the potential for people to be re-infected which together suggested a likely substantial wave of infections (minutes of meeting on 2 December 2021 [NH/030 – INQ000218231]) and threat to the NHS (minutes of meeting 9 December 2021 [NH/031 – INQ000218239]). Inevitably, the evidence base relevant to such discussions and concerns was partial and provisional. As the group was not involved in formulating policy, I cannot judge how such concerns informed policy decisions in relation to introducing further restrictions. Nor can I judge how SG policy was shaped by other factors (e.g., considerations of the impact of yet further measures on the economy, etc.) or how these impacted the decision to lift restrictions in April 2022.

48. One important lesson from this period concerned the challenges involved in communicating that even if the risks to any one individual were relatively low, the population-level risks (including pressure on the NHS) were high (on account of Omicron's transmissibility) (minutes of meeting on 9 December 2021 [NH/031 – INQ000218239]). Another important lesson from this period concerned the need to shift from communications that explained rules concerning what one could and could not do to communications that provided people with an understanding of their risk and how to manage it (minutes of the meeting on 15 April 2021 [NH/010 – INQ000218144]). In relation to this it was interesting to note how people used Lateral Flow Tests to check their Covid status before meeting others (thereby allowing a more personalised judgement of one's risk to others). It was also instructive to note the degree to which people changed their behaviour to limit transmission over the winter holiday period (minutes of meeting 3 February 2022 [NH/032 – INQ000218270]). This is evidence of people's ability to act on the basis of their understanding of how infection transmission occurs and the relevance of precautionary measures (e.g., mask-wearing when indoors, avoiding public transport).

Care homes and social care

49. The issues involved in care homes and social care were discussed before I joined the group. I am therefore unable to comment.

Borders

50. Advice on the issue of Scotland's border control was provided to the SG (Advisory Group – 29 January 2021 - Advice on Borders and Travel [NH/015 – INQ000218070]). The group was not consulted on specific proposals but reviewed the evidence concerning the impact of such controls on infection transmission. This suggested border controls have most relevance when domestic prevalence was low and that such measures could slow the import of new cases but not stop it. There was also consideration of the equality-related issues involved in such measures (e.g., their particular impact on minority ethnic groups). As the group was not involved in formulating policy, I cannot answer how such advice informed policy deliberations and decisions or how these were shaped by the devolution settlement.

Covid-19 public health communications

51. The group discussed issues concerning the public's understandings of the pandemic and the role of communication in shaping that understanding. Throughout,

there was an emphasis upon providing people with a clear understanding of the situation and actionable advice on how their own behaviour was relevant to transmission. This was associated with an emphasis on the importance of building a relationship with the public such that those seeking to communicate guidance to the public were trusted. Moreover there was an emphasis on encouraging people to think of themselves as members of a community with shared responsibilities such that each person's behaviour was relevant to both their own and others' health. This approach was communicated in writing [NH/033 - INQ000147327] at page 8 (before I joined the group) and was regularly repeated whilst I was a member (see paragraphs 11 and 12).

52. I believe the group's advice about the principles relating to communication with the public was well-received and acted upon. This was evident in public briefings, news media interviews, and public health video materials. Personally speaking, I believe the First Minister and National Clinical Director were excellent in communicating with the public in a clear, straightforward and engaging manner. Other senior officials (e.g., the CMO and DCMOs) were also very good. The regular lunchtime televised briefings (featuring the First Minister and others) were clear. My impression is that public confidence in the SG and the response to the pandemic was high (e.g., see minutes of the meeting on 18 February 2021 [NH/024 – INQ000218087]). I understand that evidence relating to opinion polling concerning confidence in the SG is covered in the SG's corporate witness statements to the Inquiry and I am aware of opinion polling evidence that shows high levels of public confidence in the SG's response. Unsurprisingly the continuation of the pandemic dented such confidence over time. I do not know how the SG communicated with key stakeholders (e.g., NHS, the care sector, local authorities, and the group did not provide advice on such communication channels).

53. The group provided advice on the broad principles of communication. It did not play a direct role in constructing or approving public health communications [NH/033 - INQ000147327]. The design and construction of health communication materials requires particular professional skills and such skills were available elsewhere in SG structures (see the Vaccine Extension and COVIOD019 Vaccine (FVCV) Programme developed by the SG Communications Division in partnership with Public Health Scotland [NH/034 – INQ000282458]). It is also appropriate to note that as policy makers (e.g., the First Minister) were to feature so prominently in public communication, it was important that policy makers took ownership of the communication process. I cannot remember the First Minister or colleagues using the

phrase 'following the science'. However, I have the impression that the First Minister and colleagues did recognise the importance of paying serious attention to the scientific evidence available and that they were alert to the many challenges in its interpretation (especially as the scientific evidence was partial and evolving in real time). I believe they sought to accurately convey the nature and quality of this evidence.

54. With regards to developing particular communication campaigns (e.g., FACTS), the C19AG had no role (see paragraph 53). As noted above (paragraph 52) I think that the messaging from key SG figures was excellent. Information and guidance were conveyed clearly and coherently. Inevitably, as the pandemic progressed, the communications became more complex and nuanced. In conditions where there were all-encompassing restrictions (something approximating a 'full lockdown'), communication was easier in the sense that the behavioural message (e.g., 'stay at home') was itself relatively simple. However, as more differentiated policies emerged (e.g., different restrictions in different regions or sectors of Scottish society and the UK) and restrictions were lifted at different rates, the message was inevitably more complicated and nuanced. Such communications could then prompt questions as to why there was such variation in policy, whether it was justified or arbitrary (or worse, based on prejudice concerning different communities' status, etc.), etc. This is not to criticise such policies (such differentiation on the basis of evidence – e.g., in relation to health outcomes, infection rates, economic harm etc. – has significant merit in balancing harms). Nor is it to suggest the messaging was unclear. Rather, it is simply to note that the message was, of necessity, nuanced. I am not aware of data concerning public confusion in relation to such nuanced policies. With regards to the differences in measures applied in Scotland and elsewhere in the UK I do not believe that it caused significant confusion. In part this is because the SG is now such a prominent feature in Scottish public life that it is a key point of reference. It may also reflect the finding that confidence in the SG and its handling of the pandemic remained relatively high whilst confidence in the UK Government waned (see paragraph 56).

55. Advisors on the C19AG were free to express their personal views in public. When doing so they were asked to make it clear that these were their personal views. Advisors were also told that materials shared at the group (e.g., SAGE reports) were considered confidential and were not for wider distribution. Beyond this, I am not aware of further guidance on advisors' behaviour. I am unaware of any inappropriate sharing of confidential material. Also, I have no evidence to suggest that any

confusion arose through group members speaking in public. Personally, I believe it likely contributed to the wider awareness of the situation. Indeed, in many ways, sharing different disciplines' evidence and perspectives on the issues involved in the pandemic served to educate the public concerning the issues associated with Covid (e.g., infection risk, vaccine efficacy, the reasons why people's behaviour mattered, etc.).

56. Public confidence in the authorities depends on the public believing that they are treated with respect according to principles of fairness and equity. Accordingly, any behaviour judged as revealing a lack of respect and a failure to treat people fairly and equitably can jeopardise people's faith in the authorities (and their message). In a context where significant restrictions are in place, behaviour which suggests that those restrictions do not apply to all is likely to prompt reaction. Errors of judgement (as when an individual forgets to wear a mask when they should) are inevitable, and their impact can likely be contained by timely action that acknowledges and apologises for the error. Where there were examples of senior figures in Scotland falling short in relation to adhering to their own guidance (e.g., Catherine Calderwood as CMO when travelling and the First Minister when removing her mask at a wake) there was an immediate apology (and in the case of the former incident, a resignation). With regards to the actions of Margaret Ferrier (MP) travelling whilst testing positive for Covid there was a swift reprimand from the First Minister and the withdrawal of the party whip. Such responses likely confirmed the sense that the regulations applied to all and were to be taken seriously (regardless of one's position). Put another way, such acknowledgements of wrong-doing were important in re-asserting that all have a role to play and are accountable to others with regards to their fulfilment of that role. My impression is that these events did not have a significant impact on public confidence in the SG or public adherence to SG measures. However, 'Partygate' and the 'Barnard Castle affair' were less obviously momentary lapses of memory. Moreover, neither was accompanied by an immediate and straightforward acknowledgement of wrong-doing and apology. As a result, these events (and discussion as to what they said about those involved) came to dominate public discourse for many months. Empirical research (Fancourt et al., 2020 [NH/035 – INQ000282459]) suggests that the Barnard Castle Affair impacted (negatively) public confidence in England (but not in Scotland). That is, rather than confidence decreasing across both nations it fell in the one in which the individual involved was a national figure (and did not generalise to Scotland).

57. In relation to communication in Scotland, I feel that there was a genuine attempt to connect with the audience in a manner that conveyed understanding, respect and honesty and that this was well-received by the public. As noted in paragraph 56 where there were examples of senior figures falling short in relation to adhering to their own guidance, swift action was taken which re-asserted that all regardless of position were subject to the same restrictions on their behaviour. More generally, there was clear communication as to what was being asked of people. A good example of this comes from the clear UK-wide message 'Stay at home, Protect the NHS, Save Lives'. Another example concerns the decision by the UK Government to replace this with 'Stay alert, Control the virus, Save lives' (May 2020). This latter was much vaguer (having no clear actionable behaviour) and was not adopted by the SG. I am not aware of significant missed opportunities in the SG public health communications.

58. With regards to future pandemic management we have learned that individuals can be motivated to act responsibly in relation to their own risk and the risks facing others. We have also learned that this can be facilitated through addressing people as members of the community with shared interests. In turn this points to the importance of establishing a sense of shared identity that brings the authorities and public together, and this requires those in authority to lead by example (e.g., through following the rules they establish). I believe this was done well in Scotland. We have also learned about the impact of inequalities on people's ability to adhere to pandemic-related measures. Although motivating people to follow guidance is key, not everyone has the resources that allow them to act on the basis of that motivation. For example, people's abilities to stay at home depends (to some degree at least) on the nature of their home and material resources (e.g., having a garden, a job that can be undertaken at home, etc.). Policies that address such wider social inequalities and so enable adherence could be relevant to future pandemic management strategies.

Public health and coronavirus legislation

59. As far as I am aware, C19AG did not provide advice concerning the use of legislation, recommendations and guidance (including the use of criminal sanctions). There was some discussion concerning 'vaccine certification' which could be used to regulate access to mass gatherings and how such measures could be interpreted by members of the public. On this, there was a sensitivity to the risk that the use of such measures could exacerbate existing inequalities in access to leisure, alienate groups who have had a troubled history with the authorities, and be judged coercive. Indeed,

there was a concern that when seen in this light, vaccine certification could have the effect of discouraging (rather than encouraging) vaccine uptake (see Advisory Group – 22 June 2021 - Advice on certification [NH/013 – INQ000218173]).

Key challenges and lessons learned

60. I have not provided any oral or written evidence to the UK Parliament Select Committees or Scottish Parliament committees concerning governmental responses to and management of the pandemic. I have not engaged in any lessons learned exercises or made any recommendations concerning the role and function of the group. In October 2021 I spoke with a WHO Consultant in Risk Communication & Community Engagement (Europe office) interested in the significance of social science research in relation to the pandemic. This featured in a brief section of a WHO publication: *Risk communication and community engagement: A compendium of case studies in times of COVID-19*. (Copenhagen: WHO Regional Office for Europe; 2022 [NH/036 – INQ000282460]). More specifically, it features on page 85-89, entitled 'Use of expert opinion from social scientists to guide RCCE strategy and actions in the United Kingdom (Scotland)'. A copy is provided.

61. With regards to my understandings of key issues relating to the management of the pandemic, I would note the challenge of decision-making in a context of uncertainty. Scientific insight into the nature of the virus, how it could spread, its impact etc. took time to develop and was necessarily provisional. I think such uncertainty is a key issue that all (advisors, policy makers, and the public) need to be prepared for. It shapes the nature of advice that can be provided to policy makers and sets constraints on policy makers' confidence on how best to weigh their policy options. It is also relevant to the communication process in that the provisional and partial nature of evidence needs to be explained. I think the group was effective in communicating to the SG the partial and evolving nature of the scientific and technical evidence as it emerged. I also believe that the communication of this complexity to the public was good. One particular challenge that emerged in relation to such uncertainty was the prominence of various forms of misinformation in the public sphere (in extreme forms involving various conspiracy theories). Such misinformation likely thrives on uncertainty and the partial nature of the evidence base. Here I believe the general level of trust in the SG was important in containing the growth of such misinformation. As such misinformation is likely to feature in any future pandemic, preparations for the future could entail consideration of how best to build communities that are resilient to misinformation.

62. On the issue of the group's functioning not being subject to a lessons learned review, it is important to note that the group was not involved in policy making. Rather it provided a forum where a broad range of scientific and technical evidence was discussed. A review of the group's functioning would likely do little to explain how policy makers drew on such evidence. Inevitably, policy makers were faced with the task of weighing complex and competing considerations associated with yet other forms of evidence.

63. My experience of serving on the group was very positive. The group was very well supported by the Secretariat. Information from a wide range of sources was routinely circulated via Objective Connect. Members received copies of the minutes of the previous meeting and agendas for the next meeting in a timely fashion. The expertise available on the group was wide and had deep connections with other groups (e.g., SAGE). So too the group's climate was extremely positive. The discussions had focus and on each issue a range of angles were explored. It was also clear that the group was highly valued by the CMO and senior colleagues. It was also clearly valued by the SG's leadership policy makers. I would happily serve on such a group in the future. I feel I learned a great deal about the pandemic across a broad range of domains (from virology through to other nations' strategies). I cannot think how its organisation and functioning could be improved. I believe it provided thoughtful analyses of the scientific and technical issues associated with the health impacts of the virus and how its spread could be contained. Moreover, it did so with careful regard to the limitations of the evidence base. With regards to contributing to SG decision-making, it was important that the group's focus was on the scientific and technical evidence and that policy was decided by others who are accountable for the decisions as to how to weigh policy options.

64. I have not been asked for feedback on my experience of the group and beyond repeating my positive evaluation I do not believe that I have anything to say that would improve the functioning of any similar group. I cannot identify issues of concern in relation to the group's organisation and functioning that would have improved the provision of relevant scientific and technical expertise and evidence.

65. Given the range of the evidence relevant to policy decisions and my lack of knowledge as to the nature of much of this evidence (e.g., in relation to the economy, NHS resources etc.), I cannot judge if the SG's decisions on the management of the pandemic should have been different and would have resulted in different outcomes.

Documents

66. I have not written articles or given evidence on the Scottish/UK's response to the Covid-19 pandemic. As noted above (paragraph 60) I spoke with a WHO Consultant in Risk Communication & Community Engagement (Europe office) interested in the significance of social science research in relation to the pandemic (October 2021). I had no correspondence with Cabinet Secretaries, Ministers, civil servants or advisors (group or individual) on WhatsApp or email (see paragraph 13). I have no contemporaneous diary, notes or voice memos.

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: 16 November 2023