

Witness Name: Professor Sheila Rowan

Statement No.: 2

Exhibits: SR2

Dated: 14 November 2023

UK COVID-19 INQUIRY

WITNESS STATEMENT OF SHEILA ROWAN

In relation to the issues raised by the Rule 9 request reference M2A/SR/01 dated 28 July 2023 in connection with Module 2A, I, Sheila Rowan, will say as follows: -

1. My name is Sheila Rowan, I am a Professor, and hold the Chair of Natural Philosophy at the University of Glasgow. I was seconded from the University at the level of 3 days/week to carry out the role of Chief Scientific Advisor (CSA) to the Scottish Government during the period 13th June 2016 to 12th June 2021. I am a Fellow of the Royal Society of London, a Fellow of the Royal Society of Edinburgh, a Fellow of the American Physical Society, an Honorary Fellow, and from 1st Oct 2021 – 30th Sept 2023, President, of the UK Institute of Physics.
2. I have answered the questions put to me by the Inquiry to the best of my ability in the time available. Where I am unable to answer the questions posed, for example because the question falls outside what was my remit, as CSA, or the question falls outside my area of expertise or knowledge, I have informed the Inquiry of this and the reasons why in accordance with the instructions outlined in the Rule 9 request. This statement contains my substantive response on issues to which I have the information and ability to provide input.
3. I have prepared this statement myself, with the support of factual information supplied by Scottish Government COVID Inquiries Response Directorate, and largely, publicly available documents, referenced in this statement. 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. In some cases, to assist the Inquiry where issues are outside my personal knowledge or recollection I have reviewed and am drawing on relevant papers to provide a view and have attempted to make clear those occasions. In places I have by necessity and for efficiency of response included verbatim statements or summarised information from published government advice notes, minutes or other documentary sources. I wish to be explicit that to gain a full and proper understanding of the reasoning behind and rationale for actions requires consideration of the source material in full, as relying only on selective quotes carries the risk of masking the difficulty, subtlety, and complexity of the situation. References to exhibits in this statement are in the form [SR2/Number - INQ000000].

Part A Sources of advice, medical and scientific expertise, data and modelling

CSA roles and responsibilities and CMO/DCMO advice and advisory bodies

4. The working relationship between my role as Chief Scientific Advisor (CSA) and the role of the Chief Medical Officer (CMO) during the Scottish Government COVID response was in accordance with the framework set out for science advice in Scottish Government [SR2/001 - INQ000274111]. The framework directly reflects the singular structure of the Scottish Governmental arrangements for the provision and sourcing of science advice, which has aspects that are distinct and differ from those of the UK Government and of the Governments of other Devolved Administrations.
5. Of particular relevance for this submission is that the position of Chief Scientific Advisor to the Scottish Government does not directly equate to the CSA to the UK Government. It does not equate in terms of resource available to support the role, in terms of reporting structure within the respective Governmental administrative systems, or in terms of the operational responsibilities expected of the role, including in a public health emergency such as the COVID-19 Pandemic. In such a situation, in Scotland, the CMO effectively performs in the Scottish system the roles of both the UK CMO and the UK GCSA. The Scottish Government CSA post in my tenure was outside of the CMO's office and outside of the day-to-day provision of pandemic advice.

6. I set out below some of the background to the CSA role in the context of the provision of science advice in Scottish Government, to aid understanding of the relative depth and content of my responses that follow to the questions received by me in the Rule 9, module 2A request.
7. In more detail, the role of the CSA in Scotland is a part-time secondment, typically of an external academic with a significant external network of professional contacts. There is no requirement for domain-specific scientific expertise since the role is a cross-cutting one. The CSA role is one that encompasses the sourcing and provision of advice. It is not of a decision-making nature. The role was vacant for approximately 18 months before I was appointed in June 2016. During the time the post of CSA was vacant, domain-specific scientific, medical and technical advice was supplied by existing scientists employed in Scottish Government, by the CMO, and by the seconded post-holders of the roles of the Chief Scientific Adviser for Rural Affairs, Food and Environment (CSA RAFE) and Chief Scientist, (Health) (CSH) and a variety of other specialist advisers. In addition, officials could choose to seek scientific advice from external scientists, specialist institutes or other expert bodies.
8. However, without a CSA in post there are gaps in the Scottish Government science advisory system. There is in such a situation: no publicly identified first point of contact to bridge the academic research community, industrial research interests, public engagement professionals in Science Technology Engineering and Mathematics (STEM), and Scottish Government; no overall point of contact to liaise with the UK GCSA or the UK CSA network on cross-cutting issues; no visible champion and advocate for the importance of science to SG policy nor of the importance of science to society; no Head of Profession for Scientists in Government, and in addition, there is no cross-cutting scientific adviser to which officials and Ministers can turn to source scientific advice in areas that sit outside the expertise of other specialist advisors.
9. Further, when I took up the role in 2016 there was no overarching set of guidelines which Scottish Government officials could refer to on when, how, or from whom, they could or should seek scientific advice on a day-to-day basis. One of the activities under my tenure was to put in place a 'science advice framework' to help guide officials in their sourcing of scientific advice - typically for situations outside of emergencies - although some of the underlying principles are common. One part of that framework is the principle that advice may in the first instance be sought from

the relevant domain-specific expert in Scottish Government if such a role exists. Thus, the CSA in Scotland does not normally source advice on matters where there is a domain-specific expert elsewhere in Scottish Government. For example, for animal health the Scottish Government has a Chief Veterinary Officer etc. It should be noted that in contrast to the UK CSA network covering UK Government Departmental interests, it is not the case that every core administrative unit in Scottish Government has a dedicated - often seconded - CSA. These are limited in number Scottish Government, as is the personnel resource provided by Scottish Government that is available to support the work of the CSA. There was no equivalent unit in Scotland to the UK Government Office for Science during my tenure. The personnel support for the Scottish Government CSA was significantly less than that available to the UK GCSA or the Welsh CSA. I believe no CSA for Northern Ireland was in place during my tenure.

10. As noted in the Module 2/2A DG Health and Social Care corporate statement and the Module 2/2A DG Economy corporate statement provided to the Inquiry on 23 June 2023, in Scotland the CMO was the lead and most senior advisor responsible for provision of advice to Scottish Government relating to health matters. This included the sourcing and provision of advice and briefings on matters related to COVID-19 and acting as primary liaison with UK Government on medical and scientific matters related to the COVID-19 pandemic, given the character of the pandemic as a public health emergency. The CMO was supported by an office and team, including Deputy CMOs and a 'Chief Scientist, (Health)' (CSH) reporting to the CMO. The CSH has a remit covering research on health and healthcare needs and acts to support the broader needs of the CMO as requested. As noted in the Module 2/2A DG Economy corporate statement provided to the Inquiry on 23 June 2023 and Module 1 personal statement [SR2/002 - INQ000183412], these are areas normally outwith the scope of the CSA advisory role.
11. Thus, as CSA the relationship of my role to that of the CMO in provision of advice related to the COVID-19 pandemic, was predominantly limited to being to act, if and as requested, in support of the CMO or CMO-delegate(s).
12. In practice this meant that the role of the CSA in provision of scientific advice to inform core decision making during the COVID-19 pandemic had boundaries that were restricted to membership of the Scottish Government COVID-19 Advisory

Group (SGCAG), at the request of the CMO, from its inception and first meeting on 26th March 2020 and the SGCAG subgroups on (i) Education and Children's Issues, from 23rd June 2020 (ii) Universities and Colleges from 19th May 2021, to the end of my term as CSA on 12th June 2021. The details of the scientific and technical advice of the groups were informed by the expertise of the independent members of the groups who were drawn from domain-specific areas relevant to the charge for each group. On these groups my role was predominantly to act as a secondary contact with wider networks if requested and if it could be useful to support the work of the groups. It was not to act as a subject expert. I had no further role in the provision of scientific advice after the end date of my CSA term.

13. Attendees of SAGE are at the invitation of the UK GCSA. The primary Scottish Government attendee at SAGE from the Scottish Government advisory system was the CMO, or a DCMO as their delegate. As CSA I attended SAGE from 28th April 2020 as an additional attendee from Scottish Government. The purpose of my attendance was related to my membership of the SGCAG and its subgroups, and in practice was predominantly to provide an additional potential informational linkage between SAGE and SGCAG, and later the two SGCAG subgroups of which I was a member, should it be useful. The primary linkage between SAGE and Scottish Government, and the lead official for provision of Scottish Government scientific and medical advice, remained the CMO (or DCMO when acting as CMO-delegate).

14. The role of SAGE in providing advice relevant to the Scottish Government was as is set out in the "Enhanced SAGE Guidance" document [SR2/003 - INQ000315538] section 6. The role of the SGCAG, Chaired by Prof Andrew Morris, was as is set out in its terms of reference [SR2/004 - INQ000217755], as are the roles of the Education and Children's Issues subgroup [SR2/005 - INQ000131075] and the Universities and Colleges subgroup in their respective terms of reference [SR2/006 - INQ000326310]. To the best of my knowledge the Scottish Government advisory bodies of which I was a member were constituted to provide advice to Scottish Government, typically via their Chairs to the CMO in the first instance. These advisory groups did not have a direct advisory function towards other public bodies in Scotland such as Public Health Scotland, the Scottish Territorial Health Boards, Scottish Local authorities etc. Individual members of Public Health Scotland were members of, and brought their domain specific expertise to, the SGCAG and its subgroups.

15. The roles of scientific advisors are to help ensure Ministers and officials have access to scientific and technical advice to inform decision making; Ministers and senior officials regularly noted the use of scientific and medical advice as one input to decision making. The principles and practice of core decision making, including how advice from different quarters e.g., on wider potential social harms, or economic questions, is considered and conflicts resolved such that decisions and policies are made, is a matter for Ministers. Ministers retain the right to ask questions directly of advisors on scientific and technical advice, and can request e.g., clarification of the evidence on which advice is based, the methodology used to formulate advice or any other aspect of the advisory process.
16. During the period of my tenure as CSA covering the COVID-19 pandemic the interactions I was able to observe between members of the advisory bodies to which I contributed, and Ministerial decision makers, were limited to those in formal online meetings and as such were focused on provision of scientific advice to government and maximizing effectiveness of response.

Scottish Government COVID-19 Advisory group “SGCAG” and SAGE

17. The SGCAG was formed at the request of the then CMO, with membership selected by her, to support her ability to provide advice to the then First Minister. I note this is in alignment with the UK Enhanced SAGE Guidance document [SR2/003 - INQ000315538], which makes explicit provision for Devolved Administrations.
18. The SGCAG (and SAGE) advice was based on the available evidence accessible to it at the time. Given the nature of a pandemic resulting from a new and emergent virus this inevitably resulted in some level of uncertainty in aspects of the underlying evidence base and available data. Such uncertainties where they existed were explicitly recognised in the papers and minutes of SAGE and other advisory group meetings as appropriate.
19. The SAGE system under which SAGE/SGCAG and their subgroups advised was the result of a longstanding system in the UK for the provision of scientific advice in an emergency as set out in the UK document entitled ‘Enhanced SAGE Guidance’ [SR2/003 - INQ000315538], The SAGE (and SGCAG) structure enables access not only to the expert input of the immediate attendees of the bodies, but, via a system of focused topical subgroups, to an extended set of scientific and technical experts

across a wide range of relevant expertise. This allows new subgroups to be stood-up as needed in any evolving situation to address emerging topics, with the input and/or advice of the subgroups feeding into the SAGE or SGCAG structure as appropriate.

Operation of advisory structures

20. In addition to the specialist advisors already noted herein, there are a further set of specialist advisors within Scottish Government covering particular topics of personal expertise, including, but not limited to, the: Chief Statistician; Chief Social Researcher; Chief Social Policy Adviser; the Chief Scientific Advisor for the Environment, Natural Resources and Agriculture and the Chief Economist. These roles are in some cases held by experts who are civil servants and in other cases by seconded academics. In my experience each of the named advisory roles above contributed to, or provided support for, some aspect(s) of scientific or other expert advice. Individual advisors were members or attendees of various advisory groups and thus had some knowledge of the respective advisory roles held and advice contributed. Individual advisors also could, and did, interact with expert groups elsewhere in the UK and its Devolved Administrations. There was however no forum in which the wider subset of relevant Scottish Government advisers could collectively communicate with each other on either any redundancy of activity or potential gaps in provision of information related to Scottish Government needs on COVID-19. Thus, from mid-2020 a 'Chiefs Group' was constituted to support advisory activity. Meetings of the Chief Advisors group were minuted by the group secretariat.
21. The Chief Advisers group was constituted in a way that it could, in principle, have been commissioned by Ministers to draw on the collective resources of the group to formulate advice to inform decision making on COVID-19. In practice that was not the functioning mode of the group. The Chief Advisors Group performed a useful function in strengthening the respective understanding of Scottish Government expert advisors of the range and scope of cross-Scottish Government advisory activity and the internal visibility of activity across the Chief Advisors Group. By the end of my term as CSA the Chief Advisors Group was still in a nascent form with an evolving model of operation.

SAGE

22. The composition of attendees at SAGE is typically at the discretion and invitation of the UKG CSA and SAGE secretariat. I am not aware of what specific considerations took place in the early stages of the pandemic to guide choices of representatives from the Devolved Administrations. As noted in the relevant SAGE minutes, for the first two meetings of SAGE on 22nd January 2020 and 28th January 2020 a representative from Health Protection Scotland was in attendance. As the pandemic progressed further, SAGE included further invited attendees from Scottish Government, in particular a Scottish Government DCMO attended various SAGE meetings from 3rd March 2020 onwards as the primary link to the Scottish Government science advisory structure. I also attended from 28th April 2020 onwards following the standing up of the SGCAG. In general, the number of attendees from any governmental administrative unit – either a UK Government Department, or a Devolved Administration was limited in number, however I do not have a way to assess what level of attendance from any of the Devolved Administrations would constitute 'sufficient'.
23. A mechanism such as SAGE to provide scientific advice in times of emergency has significant strengths. It is important to note that the SAGE system ensures that the expertise that can be harnessed in support of scientific advice to Government is drawn from a much wider set of experts than attend any individual SAGE meeting. This is due to the system of topical subgroups of SAGE – each of which has its own set of attendees which then draw on research and expertise from further experts.

Intergovernmental working

24. During my tenure as CSA, starting before the COVID pandemic and throughout, there were weekly meetings of the UK and Devolved Administration CSA network. These were not a channel used to formulate advice to inform core decision making on COVID-19. These were used as an opportunity for information sharing on a wide range of cross-cutting science topics. Notes would be taken by the Government Office for Science. I do not have information on the nature and frequency of meetings of the Medical Advisors of the 4 nations.
25. In my opinion these weekly meetings of the CSAs were a highly effective route to building connections between the CSAs and the areas for which they were responsible. This meant that if the need arose for advice in one subject area (on any topic), UK Government department or Devolved Administration that required input

from elsewhere there were existing relationships and communication channels that could be drawn on outside of the weekly meetings.

26. I give here an example of where this was used during the pandemic. I received a (rare) request from Scottish Government officials early in the pandemic for information on a topic deemed to be outside the remit of the CMO. This was for information on what was known about the properties of the SARS-Cov-2 virus when on surfaces – in particular related to stiles and fenceposts on public rights of way. I reached out via the UK CSA network to the CSA for the UK Department for Environment, Food and Rural Affairs, the CSA for the UK Health and Safety Executive and the CSA for the UK Food Standards Agency to ask for assistance, in particular for any existing information and pre-existing advice they might be able to provide. I received fast feedback from their offices including reference to the state of the scientific literature and information which enabled my office to rapidly produce an informational summary note for Scottish Government officials. This would not have been possible as efficiently and effectively if my office had to attempt to do this in isolation.
27. In my opinion having a pre-existing understanding of the responsibilities and expertise of CSAs across the 4 nations of the UK enables rapid and effective cross-departmental and cross-nation working.
28. From approximately October 2020 I attended fortnightly meetings of the CSH/CSA Health postholders from Wales, Northern Ireland and Scotland and the relevant Scottish DCMO, with representatives of the UK Government Office for Science. These were not a channel used to formulate advice to inform core decision making on COVID-19. These were held to provide a forum in which information sharing on science advice co-ordination could be carried out if required. Notes were taken by the Government Office for Science. The office of the CMO was typically represented, as the lead advisor for relevant matters in Scottish Government, and thus any actions or information could be communicated to Scottish Government decision makers via that route if helpful.
29. In my opinion this was a forum which in principle could be effective to pick up issues or iron out communication gaps that might not be dealt with due to the fast-paced nature of other meetings (such as SAGE itself) which were tightly executed. For that

to be useful, the attendees at this fortnightly meeting were required to be cognisant of what the issues were and briefed to bring them forward.

30. As noted earlier, in the Scottish system the CMO and the Office of the CMO were the lead unit driving the scientific and technical response. The respective Scottish Government advisors, before the formation of the 'Chiefs Group', did not have an internal forum for information sharing. Even after its initial formation the Chiefs group was not able to always meet on a regular schedule. I believe in future, to make best use of such 4 nations meetings, it would be helpful to also make best use of the information sharing opportunities afforded by scheduling regular meetings of the Scottish Government Chief Advisors, such that each of them respectively could then engage in the most effective way with counterparts across the 4 nations.
31. Further, preparatory meetings chaired by the UK GCSA were held in advance of SAGE meetings. Scottish Government attendance at these meetings was predominantly by the DCMO and the CSH, with actions noted by a secretariat provided by the Government Office for Science (GO-Science). I do not have a comprehensive list of attendees – this could be sought from GO-Science.

Funding and competence

32. The Inquiry has asked for comment on any issues related to the funding and resource of the advisory bodies providing advice on COVID-19. The team supporting the CSA was not a primary source of advice during this time. Had there been the requirement or necessity to provide significant advice on COVID-19 via that route, additional resource would have been required. I am not aware of wider funding issues facing SGCAG or related advisory bodies, but further information could be sought from the respective Chairs.

Conclusions and lessons learned

33. The Inquiry has requested information on measures that could be taken to subject scientific and medical advice to scrutiny. The National Academies were at various points engaged to support the work of SAGE to further support scientific and medical advice on the response to the pandemic and in principle the independent expertise of the National Academies might be further utilised.

34. The minutes from SAGE and SGCAG, along with aspects of SGCAG advice, were published during the pandemic and I believe that to have been a positive action in aiding transparency.
35. The Inquiry has interest in and requested comment on the matter of the performance of Scottish Government Ministers, Officials and my counterparts in the Devolved Administrations. Within the scope of my personal interactions, which were by their nature limited, I did not have concerns about the performance of Scottish Government Ministers, Scottish Government Officials and my counterparts in the Devolved Administrations. Of these groups, those whose work I had occasion to most frequently see in real-time were my scientific advisory counterparts both in the Devolved Administrations and the UK, and the scientific advisory groups they convened. In my experience, without exception they worked phenomenally hard under tremendous pressure.

Initial understanding and responses to COVID-19 in the period from January 2020 to March 2020

Initial understanding of the nature and extent of the threat

36. I first became aware of COVID-19 in January 2020. The primary source of information on the nature and properties of COVID-19 during this time available to me was via SAGE and is available in the SAGE minutes. I do not recall receiving information on COVID direct from Chinese sources, nor of being provided with scientific reports or publications on COVID during this period. The first SAGE COVID meeting was held on 22nd January 2020.
37. As noted elsewhere, as a matter of public health, this topic is a dedicated matter for the CMO and Officials in the area of Health Resilience, thus, following the protocol when SAGE is activated, the information I received was passed to the Scottish Government Resilience Room (SGoRR), to enable SGoRR to contact and stand up the relevant specialist bodies and advisors, who would be able to evaluate any threat posed to Scotland and form an expert opinion. My office received assurance from Health Resilience colleagues in Scottish Government that public health colleagues were sighted on essential communications and advisory activity and were liaising on a daily basis with the UK Government Department of Health.

38. From my recollection, detailed information and advice being offered to the CMO from epidemiological experts would not routinely have been shared with me during this period, as the CMO is the lead official responsible for public health advice, and this is outside of the CSA role, and I do not recall having awareness of such information or advice being given to the CMO. By the end of January 2020, my view of the threat and understanding of the disease and its spread within the UK would have been as articulated in the SAGE minutes and in information provided by SGoRR and the CMO or Health Officials. Information from the CMO/SGoRR was that 2 cases in England had been reported by end January 2020 and that Scottish Ministers were receiving daily briefings.

Decisions in relation to non-pharmaceutical Interventions (“NPIs”)

39. In relation to the request by the Inquiry to comment on the Module 2A DG Strategy and External Affairs corporate statement, provided to the Inquiry on 23 June 2023, paragraph 87, I have had no direct dealings with Mr Thomas Pueyo.

General questions about NPIs

Schools

40. My involvement in the strategy of Scottish Government relating to the role of schools, colleges and Universities in the management of the pandemic was specifically via the provision of the collective advice of the SGCAG (Chaired by Prof Andrew Morris) related to these topics, where I was a member from March 2020 to June 2021; its subgroup on Education and Children’s issues (Chaired by the Chief Social Policy Researcher, Prof Carol Tannahill); where I was a member from June 2020 to June 2021, and its subgroup on Colleges and Universities from (Chaired by Prof Carol Tannahill), where I was a member from May 2021 to June 2021.
41. My role on any and all of these groups was primarily to act as one additional, subsidiary linkage to the main SAGE committee if helpful to relay information from SAGE minutes and/or underpinning evidence papers to inform and support the domain-specific expert input from the independent experts on any of the Scottish Government COVID-19 advisory groups noted in paragraph 40. The primary link in

this context was the office of the CMO and/or Prof Andrew Morris as Chair of the SGCAG.

42. Other Scottish Government Advisors would contribute evidence and advice to inform decision making in their particular areas of expertise, and for education the primary Scottish Government input relevant to public health would be from the office of the CMO, typically from one of the DCMOs. The other Scottish Government Advisors providing expert input with respect to schools, colleges and universities were the Chief Social Policy Advisor, Prof Carol Tannahill and the Chief Social Researcher, Dr Audrey MacDougall, with (as noted above) Prof Tannahill being the Chair of the subgroup on Education and Children's issues apart from a period of its meetings from 8th Sept 2020 to 17th Nov 2020 when I deputised for her in her unavoidable absence.
43. Overall decisions on how to combine input from the advisory groups with other factors to determine policy and strategy remained within the remit of Scottish Government Officials and ultimately, Ministers.
44. The Scottish Government Education Ministers during the pandemic period comprised:
 - (i) John Swinney
 - Deputy FM and Cabinet Secretary Education and Skills 18th May 2016 - 20 May 2021.
 - (ii) Richard Lochhead
 - Minister for Further Education, Higher Education and Science 4th September 2018- 20 May 2021.
 - (iii) Maree Todd
 - Minister for Children and Young People 7th November 2017 - 20 May 2021.
 - (iv) Shirley-Anne Somerville
 - Cabinet Secretary, Education and Skills 20 May 2021 - 29 March 2023.
 - (v) Jamie Hepburn
 - Minister for Further Education, Higher Education, Youth Employment and Training 20 May 2021-29 March 2023.
 - (vi) Clare Haughey
 - Minister for Children and Young People 20 May 2021-28 March 2023.
45. The senior civil servants in Scottish Government involved in the education area during the pandemic period comprised:

- (i) Paul Johnston, DG Education, Communities and Justice to March 2021.
 - (ii) Joe Griffin, DG Education and Justice, from March 2021 onwards.
 - (iii) Graeme Logan, Director for Learning, throughout the duration of the pandemic.
 - (iv) Lorna Gibbs, interim Director of Advanced Learning and Science from Feb 2020 until April 2021.
 - (v) Katherine Peskett and Stephen Pathirana who job-shared the role, Director of Advanced Learning and Science.
46. The majority of the minutes, evidence papers and advice of the two education-related subgroups are publicly available on the Scottish Government website.
47. The Inquiry has requested information on the aim of, and rationale for, school closures in the Scottish Government's decision-making to reduce the transmission of the virus and what medical/scientific information and advice these decisions were based upon.
48. The lead advisor for medical/scientific information to inform this decision was the CMO from whom information could be sought. Indeed, the first school closures pre-date my involvement in any of the advisory groups and their contribution to advice, so I cannot answer from personal experience the totality of the medical/scientific information and advice on which that decision was based. Decisions are a matter for Ministers taking into account a range of advice, including scientific advice alongside advice from other policy areas of which I have no knowledge. However, I would expect that SAGE minutes/advice would have informed the response.
49. For the purposes of answering the Inquiry I have reviewed parts of a retrospective technical report produced by the UK Department of Health and Social Care (DHSC) jointly authored by a set of senior advisors including the CMOs of the four UK nations, that was produced in December 2022 "*on the COVID-19 pandemic in the UK*" [SR2/007 - INQ000130955]. This includes a section, Chapter 8.1, that specifically provides a retrospective discussion of NPIs in education settings with a view to informing future pandemic response articulates the evolving nature of the understanding of the role of schools in the pandemic. This notes that '*Children and young people were initially assumed potentially to be effective transmitters of respiratory infections in general*' and that there was, however, significant debate about whether school closures would be needed in the initial period given

uncertainties about the magnitude of the impact of school closures given the details of COVID compared to influenza or other respiratory infections.

50. The evolution of the pandemic however was such that as detailed in the minutes of the 17th SAGE meeting on 18th March 2020, [SR2/008 - **INQ000075778**] SAGE advised '*that available evidence now supports implementing school closures on a national level as soon as practicable to prevent NHS intensive care capacity being exceeded*'. The initial closure of schools was announced on 18th March 2020 by Scottish Government in a statement to Parliament.
51. The Inquiry has requested information on my position, at that time of the First Lockdown, on Professor Woolhouse's argument that there was little continued justification for schools remaining closed. I interpret 'at that time' as May/June 2020.
52. As a member of the various advisory groups in my capacity as a link to SAGE, but not as a subject expert, I do not recall having a personal position on this. However, any position, either of me or more importantly of the SGCAG collectively at the time would most likely have been informed by the combined advice of SAGE and its expert subgroups, amongst other evidence. E.g., at its 38th meeting on 21st May 2020 [SR2/009 **INQ000075783**] where SAGE considered a presentation of school reopening options under different 'Track, Trace and Isolate' (TTI) options, and the possible consequential effects on increasing R above 1. The minutes recognise explicitly that the precise impacts of lifting NPIs were not possible to predict accurately.
53. The Inquiry has asked what formal analysis had been done of the costs to children of school closures, given Prof Woolhouse's assertion that none had been published. I am not sure what timescale Prof Woolhouse's assertion is addressing, or what constitutes 'formal' in this context, but will answer as follows:
54. The costs to children of school closures is a term that encompasses a very wide possible range of issues e.g. the details of effects on household income. Such aspects would fall outside of any of the terms of reference of SGCAG and its subgroups and thus of my involvement.
55. I list below publicly available information and papers, which I have reviewed for the purposes of producing this statement, indicating that elsewhere in Scottish

- Government, once again, outside the CSA activities, there existed structures that I understand were specifically dedicated to considering the balance of wider harms in informing decision making (the 'four harms' approach).
56. For example, on 23rd April 2020, approximately four weeks after the first lockdown was announced, the Scottish Government published "*COVID-19 – A Framework for Decision Making*" [SR2/010 - INQ000256711] that recognised the need to balance the inter-related harms associated with the pandemic in an attempt to minimise overall harm.
 57. On 7th May 2020 the Scottish Government published analysis and evidence in support of the framework for decision making [SR2/011 - INQ000256712] including related to children.
 58. On 11th December 2020 the Scottish Government published a document titled "*Assessing the four harms of the crisis*" [SR2/012 - INQ000131028] which includes explicit discussion of the broader effects on children and young people.
 59. In parallel the Scottish Government Covid Advisory Sub-Group on Education and Children's Issues kept under regular review aspects of the wider harms caused to children and young people associated with school closures within its terms of reference, from its first meeting in June 2020 as can be seen in its published minutes [SR2/013 - INQ000343864].
 60. An in-depth personal assessment of the effect and efficacy of NPIs and specifically school closures would require access to both evidence and expert insight that are outside anything that is available to me. However, I note that extensive work on this has been carried out by the Royal Society. The Royal Society has produced in 2023 an independent report with input from a number of experts to assess what has been learned about the effectiveness of NPIs during the COVID-19 pandemic (2020-2023). This includes examination of extensive evidence from around the world, [SR2/014 - INQ000282456]. It addresses the specific question of the effectiveness of school closures and concludes '*regarding school closures and other school-based measures, the evidence suggests that they were associated with reduced COVID-19 incidence within schools and the community. However, the effectiveness of these measures was varied (compared to community-wide measures such as stay at home*

orders), time dependent, and often contingent on the adherence to the measures implemented and the targeted age group of children’.

61. The Inquiry has requested information explaining when and why the Scottish Government decided to impose a second lockdown on 4 January 2021 such that schools were closed, and the medical/scientific information and advice on which the strategy was based.
62. The decision to impose a lockdown in January 2021 was taken by Ministers and I do not have information on exactly when or how they came to this conclusion. Nor do I (nor did I at the time) have sight of all the medical and scientific information and advice they received on which that strategy was based. The lead advisor contributing advice on pandemic matters was the CMO and that could be sought from him.
63. My recollection of the chronology and high-level content of the relevant scientific and technical advice coming from SAGE preceding the lockdown is as follows. There was a SAGE meeting on Friday 17th September 2020 (SAGE 57) which I attended. There was discussion of the state of the pandemic, the rising case rates and future scenarios for the evolution of the pandemic including the possible effect of NPIs.
64. The SAGE minutes from that meeting [SR2/015 - **INQ000120558**], amongst other things, state that *‘medium term projections indicate a rapid increase in hospital admissions in the coming weeks and in a scenario where there are no interventions, this would have the potential to overwhelm the NHS’* and that:
- ‘Non-pharmaceutical interventions (NPIs) on local and national scale are needed to bring R back below 1. Individual NPIs are highly unlikely to achieve this, and a package of measures will be needed. In choosing options it is important to recognise that NPIs will likely need to be in place for a significant length of time’.*
65. An action from the meeting was for an updated paper to be brought to SAGE on NPIs by no later than Monday September 21st.. There was a further SAGE meeting on September 21st, at which I was not present, where the minutes reflect the same conclusion as the meeting of the 17th but with more detail on the possible package of NPIs. [SR2/016 - **INQ000212102** The package of measures identified by SAGE as

needed to reduce the progress of the pandemic was comprehensive but did not include closure of schools.

66. The package of measures recommended by SAGE on 21st September was not at that point implemented (in England or in Scotland) in the form advised at that time. Instead, a series of restrictions were introduced, and 'tiered' interventions announced in Scotland in October 2020.
67. The pandemic then evolved over the months following September, notably with the appearance of a new variant of the virus (the 'Alpha' B.1.1.7 variant), with properties that included increased transmissibility over other variants in circulation. During this time a series of SAGE meetings were held in quick succession until by SAGE 74 on 22nd December 2020 SAGE advised that [SR2/017 - INQ000075511], *"it is highly unlikely that measures with stringency and adherence in line with the measures in England in November (i.e., with schools open) would be sufficient to maintain R below 1 in the presence of the new variant. R would be lower with schools closed, with the closure of secondary schools likely to have a greater effect than closure of primary schools"*.
68. The Inquiry has requested information on the rationale and scientific basis for the decision, on 19 January 2021 by the First Minister, to extend Scotland's lockdown until mid-February 2021 and in particular, why schools remained closed at that point.
69. The overall rationale for decision making remained as always with Ministers after balancing a range of advisory and policy input I do not and did not have information on the totality of that advice. To help answer the questions from the Inquiry I have again reviewed the publicly available minutes of the Covid Advisory Sub-Group on Education and Children's Issues.
70. With respect to school closures, the minutes of the Scottish Government Covid Advisory Sub-Group on Education and Children's Issues from 6th January 2021 [SR2/018 - INQ000274019], make reference to an extra-ordinary meeting of the group on 31st December, at which advice was formulated for transmission to the Deputy First Minister by the then Chair (Prof Tannahill) [SR2/019 – INQ000274020]. I have been informed by Scottish Government that formal minutes of this meeting are

not available, as standard practice was not to take formal minutes of extraordinary meetings. I did not see the advice provided by group at that time and therefore I cannot comment in detail on this advice. Prof Tannahill may likely be able to provide more detailed information, but a summary of the advice delivered on the 31st is noted in the published minutes of the meeting on the 6th, i.e., that schools should remain closed beyond 18th January on a precautionary basis, and that there should be a fortnightly review of the situation. There was recognition of the need for further evidence in particular about transmission of the new variant virus among and by children and young people.

71. The Inquiry has asked for the rationale and scientific basis for the following sequence of events, that on 22 February 2021, Scotland's schools began a phased reopening, with the youngest pupils returning to the classroom (primaries 1 - 3) and that Senior 5 and 6 pupils were next to return on 15 March 2021.
72. The overall rationale for decision making remained as always with Ministers, and the overall scientific advice with the CMO.
73. The Scottish Government Covid Advisory Sub-Group on Education and Children's Issues met in January and February 2021 and reviewed evidence including information provided by Public Health Scotland on COVID-19 relevant to children and young people and produced an advice note, published on 3rd February.
74. The note [SR2/020 - INQ000274021] lays out in detail the evidence considered by the group which informed its advice. I will not reproduce this in entirety here, but this included consideration that case numbers, levels of community transmission and test positivity rates were decreasing. The note also details that there were ongoing pressures on the NHS and continued uncertainties related to the consequences of the properties of the B.1.1.7 virus variant of concern. The group advised that any relaxation of restrictions should be staged, enabling time to plan each stage and then monitor its impacts and importantly aim for a stable and sustainable approach, and that options for return to in-person learning for young children and for limited numbers of children would have a lower impact on R.
75. Thus, subject to no significant changes in the evidence, the subgroup advised that ELC, P1-P3 and small numbers of senior secondary pupils requiring practical in-school learning could return from 22 February.

76. My understanding is that this advice would have informed the Scottish Government work on an overall plan for easing of restrictions, but I do not, nor did I at the time, have information on the totality of scientific and technical advice that informed that. Once again, that could be sought from the CMO.
77. The First Minister announced a revised strategic framework on 23 February 2021, with an indicative date of 15 March 2021 for the next phase of easing of school restrictions, along with other easings. I have not been able with the information available to me to reconstruct why 15th March was chosen by Ministers, other than to surmise that it was approximately 3 weeks after 22nd February and thus allowed some data to be available on the effect of the earlier easing of restrictions.
78. The subgroup on 3rd March produced a further advice note, [SR2/021 - INQ000274022], and met again on 9th March. It considered data and evidence on the state of the epidemic, including on infections, test positivity in children, the estimated R number in Scotland and school attendance rates and noted [SR2/022 - INQ000274023], that it was *"consistent with the sub-group's principles for proceeding with the proposed phase 2 return to in-person learning and the resumption of school age childcare."*
79. The Inquiry has asked for the rationale and scientific basis for the renewed framework announced by the then First Minister on 6 April 2021, that all secondary school pupils would return full time to the classroom after the Easter holidays and that they would no longer need to follow social distancing rules but were required wear face coverings throughout the school.
80. The overall rationale and basis for the decision and announcement by the First Minister would be a matter for Ministers, and the overall scientific advice could be sought from the CMO.
81. The public record indicates that the Education and Children's subgroup met on 6th April. I paraphrase from its minutes [SR2/023 - INQ000274024] as follows: the group considered the latest data on the state of the epidemic, hearing input that a data and surveillance task and finish group had met the previous week to consider the latest data and confirmed that it had seen nothing to suggest that the full return to school could not proceed as planned after the Easter break. The sub-group was content that the latest data on the state of the epidemic supported the planned return to full-time in-person school-based learning.

82. The group had on various occasions published advice on the mitigations required to support safety for staff and pupils on a return to in person learning – e.g., its advice note of 12th February 2021 [SR2/024 – INQ000343870]. In general, this advised 2m physical distancing where possible along with other interventions such as ventilation, hand and respiratory hygiene and use of face coverings. For situations where 2m distancing was not possible, other mitigations such as face coverings were recognised as increasing in importance.

Decisions related to easing the first lockdown 29th May 2020 – 7th September 2020

Steps taken to ease the first lockdown

83. The Inquiry has asked how the views of Prof Woolhouse on weighing harms caused by lockdown were considered by Scottish Government. Prof Woolhouse was an expert member of the SGCAG, and his views informed the discussions of the group in its formulation of advice to the CMO and Scottish Government. As noted above, wider work elsewhere in Scottish Government, beyond the responsibility of the CSA role, used a 'four harms' approach for decision making.

Care homes and social care

84. With respect to the Inquiry's request as to my involvement in the strategy related to the role of care homes and social care, my recollection is this was limited to the collective provision of scientific advice from the SGCAG to the CMO and Scottish Government on specific occasions in the period May 2020/June 2020 as reflected in the publicly available SGCAG minutes. Overall decisions on strategy remained within the remit of Ministers. The minutes of the SGCAG meeting on 23rd April 2020 note that it was informed that a separate 'task force' on care homes was in operation. Information on this could be sought from Scottish Government Health Officials.

Key challenges and lessons learned

85. In my opinion the UK protocol of having guidelines (the Enhanced SAGE guidelines) for sourcing of emergency advice via SAGE was beneficial, including the ability for the lead advisor in Scotland – in the case of the COVID-19 Pandemic, this being the CMO - to stand up a dedicated advisory group of independent experts. The tiered system of topical subgroups allows for the sourcing of granular advice across

emerging topics with wider input. In terms of challenges: SAGE is by definition designed to give advice in emergencies, i.e., strictly speaking that is not routine advice over very long periods (years). There was, as time moved on, a need to transition from an emergency to a chronic phase i.e., a need to transition from the emergency advice structure to an 'advice as normal' situation. That necessitated new structures and new ways of working.

86. I note that the Scottish Government Standing Committee on Pandemic Preparedness have recently produced an interim report [SR2/025 - INQ000103004] with recommendations on anticipating, preparing for and responding to a pandemic and the Inquiry may wish to consider these.
87. I have provided the inquiry with a Transcript of evidence given by me to the House of Commons Scottish Affairs Committee on 'Coronavirus and Scotland' [SR2/026 - INQ000147324].

Documentation

88. The Inquiry has requested provision of certain classes of documentation. Where possible I have supplied this, with the exceptions that:
- i) I have no access to, and have not had access to, my government email account since the end of my term as CSA in June 2021. Any relevant information therein could be sought from Scottish Government.
 - ii) Informal communication by e.g., WhatsApp or other equivalent route was not a route I used to receive or give advice or information to Scottish Government on COVID-19.
 - iii) I do not hold any diary, notes or voice memos made during the specified period relevant to my involvement in the Scottish Government's response to COVID-19. Any material related to Scottish Government activity was returned to Scottish Government at the end of my term as CSA to be dealt with in line with standard Scottish Government policies.
 - iv) Any briefings I received, or submissions, analyses or notes received or provided to me are not in my possession and would be held Scottish Government as noted elsewhere.
 - v) Papers and Minutes of COVID-19 advisory groups and subgroups, Chief Advisors meetings, or other Scottish Government, UK Government or 4

nations meetings I attended related to COVID-19 requested by the Inquiry are not held by me and would be held by the secretariats of the respective bodies.

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: 14/11/2023