

Witness Name: Susan Michie
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UK COVID-19 INQUIRY – MODULE 1

Witness Statement of Professor Susan Michie

I, **PROFESSOR SUSAN MICHIE** of the Centre for Behaviour Change at University College London, Gower Street, London, WC1E 6BT will say as follows:

1: Introduction

- 1.1. I make this statement pursuant to the Covid-19 Inquiry's Module 1 Rule 9 request of 20 January 2023.
- 1.2. The matters I set out within this statement are within my own knowledge save for where I state otherwise. Where I refer to facts not within my own knowledge, I will provide the source for those facts. The contents of this statement are true to the best of my knowledge and belief.
- 1.3. I previously submitted a response to the Inquiry's Rule 9 Questionnaire of 2 September 2022 on 10 October 2022 (**'The Rule 9 Questionnaire Response'**) and a witness statement in response to the Inquiry's Rule 9 request of 21 December 2022 for Module 2 on 24 March 2023 (**'The Module 2 Statement'**).

2: Professional background and expertise

- 2.1. As I outlined in the Rule 9 Questionnaire Response and the Module 2 Statement, my current role is Professor of Health Psychology and Director of the Centre for Behaviour Change at University College London (**'UCL'**). I have been employed at UCL in my current position since 2002.

- 2.2. I am considered a global leader in behavioural science; my research focuses on behaviour change in relation to health and the environment: how to understand it theoretically and apply theory to intervention development, evaluation and implementation. My research, collaborating with disciplines such as information science, environmental science, computer science and medicine, covers population, organisational and individual level interventions. Examples include the Human Behaviour-Change Project, Complex Systems for Sustainability and Health and the CORSAIR study, on which I was a Co-Investigator. I provide more detail about the CORSAIR study from paragraph 3.1 of the Module 2 Statement. I am an investigator on more than 15 research projects and have published over 500 journal articles and several books, including 'The Behaviour Change Wheel: A Guide to Designing Interventions'.
- 2.3. A summary of my qualifications, employment history and major publications can be found at paragraphs 1.1-1.10 of my Rule 9 Questionnaire Response and they are reproduced below from paragraphs 2.4-2.11.
- 2.4. The following table outlines my qualifications:

Table 1- Qualifications

1976	B.A. in Experimental Psychology, Oxford University
1978	M.Phil in Clinical Psychology, London University
1982	D.Phil in Developmental Psychology, Oxford University
1978	Chartered Clinical Psychologist, British Psychological Society
1993	Chartered Health Psychologist, British Psychological Society

- 2.5. The following table outlines my employment history:

Table 2- Employment History

2002- Present	Professor of Health Psychology and Director of the Centre for Behaviour Change (CBC), University College London: The CBC is a leading world-renowned centre that promotes the science and practice of behaviour change to address key challenges facing society through interdisciplinary collaboration and partnerships.
1982-84	Clinical Psychologist, Guys Hospital

1984-91	Clinical Psychologist and Hon Lecturer in Developmental Psychology, Royal Free Hospital School of Medicine
1989-2002	Senior Research Fellow in Clinical Health Psychology (p/t after 1993), Royal Free and University College Medical School
1991-2002	Senior Clinical Psychologist and Hon Senior Lecturer in Health Psychology, Royal Free Hospital School of Medicine
1993-2002	Deputy Director, Psychology and Genetics Research Group King's College London: This group conducted research into societal and individual attitudes towards, and the impact of, genetic testing for health conditions, such as breast cancer.
1993-1996	Research Fellow, King's College London
1996-2001	Senior Research Fellow, Kings College London
2001-2002	Reader in Health Psychology, Kings College London
2002-	Co-Director, Centre for Outcomes Research and Effectiveness, University College London: The centre conducted research and developed evidence-based guidelines in relation to mental and physical health.
2002-	Director of Health Psychology Research Group University College London: The group conducted and disseminated research on the prevention and management of ill-health and on ways to improve health professional practice.
2002-2012	Director of Health Psychology Research C&I Mental Health & Social Care Trust, Camden and Islington PCTs
2002-	Honorary Consultant Clinical Psychologist Camden and Islington Mental Health and Social Care Trust
2002-2006	Reader in Clinical Health Psychology, University College London
2005-	Chair in Health Psychology, Department of Psychology University College London
2006-2009	Senior Scientist, MRC Health Services Research Collaboration (p/t secondment) University of Bristol: This conducted research into a range of questions aimed at improving health services. My focus was on the implementation of evidence-based practice.
2009-2015	Co-director, National Centre for Smoking Cessation and Training UK: The centre brings together evidence and best practice in the field of smoking cessation as the basis for training practitioners, managers and commissioners.

2013-	Director, Centre for Behaviour Change, University College London
2015-2018	Scientific Advisor, National Centre for Smoking Cessation and Training, UK
2018-2023	Co-Director, Policy Research Unit in Behavioural Science Department of Health and Social Care: This works closely with the Department of Health and Social Care to address their policy questions by bringing together current evidence and conducting research to fill policy gaps.

- 2.6. I have 580 relevant publications, with my top 5 in terms of citations below:
- 2.7. *Developing and evaluating complex interventions: the new Medical Research Council guidance*; P Craig, P Dieppe, S Macintyre, S Michie, I Nazareth, M Petticrew 2008 BMJ 33, 10413 citations [SM/01- INQ000145919]. This paper resulted from my work with the Medical Research Council's Health Service Research Collaboration which produced guidance aimed at increasing the effectiveness of trials of complex interventions and hence, knowledge that could be used to improve population health. It was very widely taken up in proposals and protocols for research, especially in the UK.
- 2.8. *The behaviour change wheel: a new method for characterising and designing behaviour change interventions*; S Michie, MM Van Stralen, R West 2011, Implementation science 6 (1), 1-12. 8576 citations [SM/02- INQ000145920]. This paper reports a new, integrative framework for designing and evaluation of behavioural interventions. It was based on work that identified and synthesised 19 existing, partial and overlapping frameworks. It has had significant global impact on research investigating a wide range of behavioural interventions.
- 2.9. *Better reporting of interventions: template for intervention description and replication (TIDieR) checklist and guide* TC Hoffmann, PP Glasziou, I Boutron, R Milne, R Perera, D Moher, ... S Michie 2014, Bmj 348. 5393 citations [SM/03-INQ000145921]. This paper is the result of an international, multidisciplinary collaboration aimed at improving the reporting of interventions, on the basis that poor reporting has led to slow and inefficient accumulation of knowledge across clinical and public health domains.
- 2.10. *The behaviour change technique taxonomy (v1) of 93 hierarchically clustered techniques: building an international consensus for the reporting of behaviour change*

interventions: S Michie, M Richardson, M Johnston, C Abraham, J Francis, W Hardeman, 2013, *Annals of behavioural medicine* 46 (1), 81-95. 5028 citations [**SM/04-INQ000145922**]. This paper has transformed behavioural science as previously there was no systematic and shared way of specifying the 'active ingredients' of behavioural interventions. It has led to much improved intervention design and evaluation, evidence syntheses and implementation of effective interventions.

- 2.11. *Multidisciplinary research priorities for the COVID-19 pandemic: a call for action for mental health science* EA Holmes, RC O'Connor, VH Perry, I Tracey, S Wessely, L Arseneault, 2020 *The Lancet Psychiatry* 7 (6), 547-560. 4479 citations [**SM/05-INQ000145923**]. I was invited to join this group of eminent international scientists early on in the Covid-19 pandemic to provide a behavioural science lens in developing recommendations for mental health science within the pandemic context.

3: SAGE during the H1N1 Pandemic ('Swine Flu Pandemic')

- 3.1. I was involved in SAGE during the 2009-2010 Swine Flu Pandemic (**'H1N1 SAGE'**).
- 3.2. The Swine Flu Pandemic was caused by the H1N1 influenza virus and was declared to be a pandemic by the World Health Organization (WHO) on 11 June 2009. The pandemic spanned the time-period June 2009 to August 2010.
- 3.3. H1N1 SAGE was activated in 2009 to provide scientific advice on the pandemic. It was operational between 5 May 2009 and 11 January 2010 (**'the activation period'**). There were 22 H1N1 SAGE meetings over the course of its activation for the Swine Flu Pandemic. These took place between 5 May 2009 until 11 January 2010. I can recall that I attended the majority of those meetings. I was the only behavioural or social scientist on H1N1 SAGE during the pandemic, so I brought behavioural and social issues into discussions as appropriate.
- 3.4. I recall that I was invited to participate in H1N1 SAGE as a member by the Chair of H1N1 SAGE at the time, Sir John Beddington, Chief Scientific Advisor, in May 2009 when H1N1 SAGE was first set up. This was a development of my prior membership of the Scientific Pandemic Influenza Advisory Committee (**'SPIAC'**), which I describe below.
- 3.5. SPIAC evolved from a group called the Scientific Advisory Group on Pandemic Influenza (**'SAG'**), developed by the Department of Health in around 2005, which was created to advise on the scientific evidence base for health-related pandemic influenza policies. In December 2007 the membership of SAG was extended to include a wider

range of scientific disciplines and an independent Chair was recruited. I was invited to participate in SAG in December 2007. The Chair at the time was Sir John Beddington, Chief Scientific Advisor. The group eventually became known as SPIAC from around 2008.

- 3.6. During its activation for the Swine Flu Pandemic, H1N1 SAGE was supported by the existing SPIAC sub-groups. These were: The Sub-Group on Modelling ('**SPI-M-O**'), Sub-Group on Behaviour and Communications ('**SPI-B & C**') and Clinical Countermeasures ('**SPI-CC**').
- 3.7. From my recollection, the H1N1 SAGE members were recruited from SPIAC. All participation was voluntary and not remunerated.
- 3.8. I first set up and chaired SPI-B & C in 2008, prior to the Swine Flu outbreak, while I was a member of SPIAC. I cannot recall the exact date that SPI-B& C meetings started, but the first record of minutes I have are dated 28 July 2008. I led and chaired SPI-B & C during the Swine Flu Pandemic.
- 3.9. The remit of SPI-B & C was to advise SPIAC on the behavioural and communication science aspects around the health response to an influenza pandemic. During the Swine Flu pandemic SPI-B & C provided advice to H1N1 SAGE and wrote briefings for Government Ministers. SPI-B & C had a small budget to pay for part-time research assistant support to review evidence and write reports in response to questions put to the sub-group. I cannot recall how many meetings of SPI-B & C there were during the Swine Flu pandemic, or their frequency, nor can I recall exactly how many meetings I attended, but I would expect the Secretariat at GO-Science would have a record of all the meetings I attended. Please revert to GO-Science for this information.
- 3.10. SPI-B & C responded to requests from H1N1 SAGE to advise on the behavioural implications of a variety of policy issues that arose during the course of the Swine Flu Pandemic. These included the impact and implications for communication of offering vaccination and antiviral treatment to targeted groups; the impact on public responses of the terms used to describe targeted groups; the likely scale of fraudulent use of the 14 day self-certification of sickness absence and measures to reduce the problem; the school closure policy during the pandemic; communication implications of attitudes to being vaccinated against Swine Flu and how to communicate the government planning assumptions. I don't recall the exact mechanism for the way in which SPI-B & C was commissioned to work on the relevant issues, but I do remember these commissions being appropriate. There was a standing item for SPI-B & C matters to be brought to

H1N1 SAGE by its Chair (myself). This meant that we could actively bring SPI-B & C issues to H1N1 SAGE rather than just waiting to be handed commissions by H1N1 SAGE. However, the standing item was either the last or towards the end of the agenda, so often there would be insufficient time to discuss behavioural issues. This led Dame Deirdre Hine, in her independent review into the response to the Swine Flu Pandemic, to suggest that more attention should have been given to the behavioural work within SAGE.

- 3.11. SPI-B & C provided H1N1 SAGE with 9 briefings during its activation period. These were on a range of topics including policy on school closure, vaccination and principles of effective communication. I have a document which contains all these briefing papers titled 'Briefings from the Scientific Pandemic Influenza Advisory Committee: Behaviour and Communications Sub-Group May 2009-February 2010' [SM/06- INQ000145924]. The behavioural and social recommendations made by H1N1 SAGE are available in its minutes, of which GO-Science would have a record.
- 3.12. During the H1N1 SAGE meetings, my role was to share information and provide advice concerning the social and behavioural aspects of H1N1, including communications strategy. This included ministerial briefs. I had a part-time researcher working with me, paid for by the SAGE mechanism, to support this work.
- 3.13. Although my bringing in of the behavioural dimension was welcomed, as I mentioned in paragraph 3.10, this item was towards the end of the agenda so often didn't get the attention it deserved. However, having the SPI-B & C group enabled work to get done outside the formal meetings. One positive development was an agreement with SPI-M that we would send observers to each other's' meetings so that behavioural scientists would be able to monitor what behavioural evidence might help modelling and SPI-M would get an understanding of the range of issues addressed by SPI-B & C. This also allowed SPI-B & C to provide SPI-M with behavioural data and we had access to up-to-date modelling data where needed. I only had involvement in SPI-B & C, and to a small extent, SPI-M. There was good communication between these groups, which was directly between myself as Chair and members of SPI-M. A member of SPI-M was a standing member of SPI-B&C
- 3.14. I can recall that there were about 14-18 scientists on H1N1 SAGE, drawn from various disciplines such as virology, epidemiology, immunology, psychology, and anthropology. I remember it as a cohesive and well-functioning group, with time for in-depth discussions, although I was sometimes frustrated that the time allocated to

discussing social and behavioural issues was a very small fraction of the total time. However, it was possible and productive to discuss issues as a group and volunteer to work on reports on topics about which we had particular expertise, experience or interest. I was able to talk to all the members informally at meal breaks, which enabled the development of a good rapport with other members, interdisciplinary interactions and cross-learning. I recall that there was a member of SPI-M who was a permanent member of SPI-B & C and there were also quite a few members of Cabinet office, Department for Health, Government and the Secretariat present at SPI-B & C meetings.

- 3.15. I don't recall any problems of structure and processes with H1N1 SAGE during the Swine Flu Pandemic, apart from insufficient time on occasions to deal with behavioural and communications issues. The participation within SPI-B & C was good and from my memory all participants remained active until the group was ended along with H1N1 SAGE.
- 3.16. The work of SPI-B & C was done within the framework of its own and SAGE meetings. Members were responsive to emergency teleconferences.
- 3.17. There was a small secretariat for H1N1 SAGE. The Secretariat comprised of Officials from the Department of Health, supported by GO-Science. I had the support of a part-time researcher to support the work of SPI-B & C and general Secretariat support. I don't know what support other members or sub-groups had beyond general administrative support.
- 3.18. I contributed to a SPI-B & C consensus statement titled 'SPI Behaviour and Communications group response to consultation document 'Lessons Learned – Learning from the Pandemic Experience', dated 19 November 2009 [SM/07-INQ000145925] along with a number of other SPI-B & C participants. In this submission, we outlined aspects of SPI-B & C and H1N1 SAGE's work and structures that worked well during the pandemic and those that did not (**'the positives and criticisms'**) and made recommendations for the future.
- 3.19. The positives, criticisms and recommendations that we identified in the submission are reproduced below. They are direct quotes from the consensus statement and, as such, are not my words. I have therefore provided quotation marks around them. Where elaboration is required, I have inserted my own words in square brackets.

Positive aspects

- a) "There was a committed group of behavioral and social scientists in B&C who gave generously of their time to the work of the group. The Chair was very effective and was able to maintain group cohesion despite geographical constraints. The Chair was also able to represent B&C (and behavioural science) and its interests at other meetings and conferences".
- b) "The funding of a part-time researcher to support the work of B&C was invaluable in enabling us to produce evidence-based briefing papers in response to requests from SAGE. We were fortunate to be able to draw on the services of a very able researcher; however, it is likely that at other times, such a person would not be available at short notice".
- c) "The excellent support from the SAGE secretariat".
- d) "The most valuable part of our work was, according to feedback, providing briefing papers to SAGE and the CCC and responding to specific requests and questions. It was good to see how much expertise and evidence could be brought to bear on every question we were asked".
- e) "Addressing some of the questions posed highlighted some gaps in the literature on how to structure communication about pandemics, vaccine uptake and prevention behaviors in general. This information should be invaluable in developing future research agendas so that for future incidents the evidence base is strengthened".
- f) "The role of B&C in supporting researchers was extremely helpful. It ensured that researchers from different fields were put in contact with each other and made aware of other ongoing research projects and funding opportunities. Such research provides a vitally important way of learning lessons for the future. Early results from research projects can also help to inform policy during the current incident".

Negative aspects/criticisms

- a) "Many weeks and hours were wasted trying to establish communication links with the DH Comms team, who had not been fully informed of the work of B&C or understood its remit to advise on their work in relation to pandemic flu. For example, there seemed to be a lack of understanding that there was an evidence base that could have improved their work and that the most effective and efficient access to that evidence base resided in B&C. Our input and influence remained patchy and intermittent, leading to frustration amongst B&C and missed

opportunities by Department for Health Communications. One example was the failure of Department for Health to heed B&C advice on communicating risk information – not to present relative without absolute risks (see the leaflet now in use which describes a fourfold risk of flu in pregnant women in the absence of an absolute risk figure). Journalists amongst others are now trained following the “pill scare” not to present relative risks without absolute risks”.

- b) “DH Coms invariably sought B&C input only at a late stage, when it was usually no longer possible to make a significant constructive contribution to shaping communication strategies. Much of the work was reactive rather than proactive. While reactive responses are essential, especially as a situation unfolds, there could have been more proactive engagement with respect to designing information leaflets and the MORI survey tracker questions for example. One member of B&C resigned considering that the work was not good use of his time, given the questionable impact, and time had to be spent dissuading a second member from resigning for the same reasons. This situation was not so much due to individuals within Department for Health Communications as to the lack of a pre-existing mechanism for B&C to give scientific advice and of Department for Health receptivity to the advice. To some extent, this was inevitable given the timing of the outbreak; however, there was also a lack of direction from the top”.
- c) “There were many questions that B&C was not asked by Department for Health Communications or SAGE to consider where the group's collective expertise in behaviour change, communication and programme design could have made an important contribution”. [For example, policy officials did not request advice from us on likely vaccine uptake rates].
- d) “B&C was not sufficiently joined up to the Chief Medical Officer (‘CMO’) and his team, leading to advice being ignored (for example, to avoid referring to ‘priority’ groups for vaccination). At the very least it would have been good to have better lines of communication between B&C and the CMO's team”.
- e) “There was very little time given by SAGE to considering issues discussed by B&C. Whilst the business of the other two sub-groups was well covered within the body of SAGE meetings, this was not the case for behavioral and communication issues. This contrast was well illustrated in discussions about vaccines in which tens of hours of discussion was given to vaccines, and about three minutes given to discussing uptake issues. (and this was B&C initiated)”.

- f) "The proposal of a deputy on SAGE was not accepted, leading to a large additional workload for the one behavioral scientist who was a member. For most members of SAGE, the business of SAGE has considerable overlap with their day jobs. For behavioral and social scientists with relevant expertise, pandemic flu is only a small part of their everyday jobs. It is therefore very difficult to justify such large amounts of time to sit through meetings, only a small part of which is relevant to their expertise and potential contribution".
- g) "None of the five research projects prioritized by B&C were funded by NIHR, leading to low morale and annoyance amongst some members who had put considerable work into developing these and felt that the decision-making process was not satisfactory. The services of NICE to conduct rapid reviews to inform key behavioral and communication issues were not taken up without explanation".
- h) "This may have been a reflection of the fact that there was no behavioral or social scientist on the 12 strong NIHR Pandemic Flu Commissioning Board. In addition, research recommendations given by SAGE reflected the make-up of the committee; whilst there was considerable overlap of expertise amongst other members, there was not on behavioural issues and a lone voice is not a reasonable representation of an important area of work (the other SPI sub-groups have more than one member on SAGE)".

3.20. We also recommended that the following changes be made:

- a) "Develop in advance a *modus operandum* for the seeking, receipt and enactment of B&C evidence-based advice. Ensure commitment from Department for Health Communications is maintained over time when there is staff turnover, perhaps by having someone from B&C working closely with Department for Health Communications from the outset".
- b) "Set up a procedure for Department for Health Communications to be informed by B&C on both their mass campaigns and communications".
- c) "Set up an explicit system for requesting briefing papers and responding to them so that there is maximum clarity and timeliness of the requests. A template for responding could also be considered".
- d) "Consider alternative models such as those raised here for contributing B&C advice and perspectives to the work of SAGE and seek B&C's views on these". [Model I

interpret as system/procedure/*modus operandum* as described in a to c immediately above].

- e) "Agree to a deputy for the behavioural/social scientist on SAGE".
- f) "Discuss with NICE in advance of the next incident how it could best underpin the work of SAGE with relevant evidence about behaviour and communications".
- g) "Develop a job description and recruitment strategy for a part-time secondment for a researcher to support B&C that could be enacted as soon as an incident was imminent".
- h) "Appoint a behavioral scientist to the NIHR Pandemic Flu Commissioning Board and other relevant strategic bodies".
- i) "Have procedures in place to allocate funding and / or approval to research projects quickly following a major incident. While funding bodies may theoretically be better placed to organise such activities, experience in the present situation suggests that SAGE or SPI may be best placed to organise and oversee the spontaneous research efforts that will inevitably spring up during the initial days and weeks following a major incident. Defining this as a specific role for SAGE or SPI may be useful".
- j) "Assess the questions B&C were asked to respond to and seek out a broader range of expertise to cover these in advance of any future major incident. In addition, use recent experience to anticipate relevant questions for the future in order to delegate workstreams and preparation of documents in the coming months/year".
- k) "Fund at least one face-to-face meeting of B&C near the beginning of any future incident".
- l) "Establish a large enough team of scientists, with enough redundancy, so that B&C has sufficient people to attend the teleconferences and respond in between meetings".
- m) "Fund a specific workshop to identify lessons for researchers from the swine flu pandemic and how best to study the next incident".

4: Pandemic Planning

- 4.1. I consider that the state of the UK's pandemic planning, preparedness and resilience at the time that the Covid-19 pandemic struck was inadequate. This is because

recommendations made by Dame Deirdre Hine in her independent report (for example, recommendations 13 & 22 among others) had not been carried out and the public health system had been under-resourced and fragmented over many years. This meant that there was not the adequate structure and resources to oversee the crucial test, trace and isolate system. Instead of rectifying this problem in 2020, and building on the infrastructure we had, the Government chose to go down the route of finding new private contractors to implement the test, trace and isolate system. They appeared to lack expertise and local knowledge, which were key to the success of a test, trace and isolate system. This led to a vast waste of money and resources, inadequate pandemic control and a legacy of a public health system that is in no better shape to manage the ongoing Covid-19 pandemic or any new pandemics.

- 4.2. I consider that the UK Government should have invested in the professional and expert public health infrastructure, staff and training to carry out the necessary testing, tracing and support for self-isolation that was required. Instead, huge amounts of funds were diverted to untested commercial organisations without the relevant expertise and experience, local knowledge or ability to develop capacities and communication networks required for the success of test, trace and isolate. A blueprint for a test, trace and isolate system [**SM/08- INQ000145926**] was collectively produced by Independent SAGE, of which I was a member. In summary, it called for:

- (a) Replacement of the failed, falsely named and private sector run 'NHS' Test and Trace with a system for England which is rooted in the regions of England and in local areas, and for a new system to be integrated throughout with the National Health Service and provide for the needs of people and the communities in which they live.
- (b) NHS England to be the lead national organisation and provide the infrastructure and logistics for the organisation and functioning of the system.
- (c) In each top-tier local authority the local Director of Public Health to have the leadership role and convene the necessary management structure in conjunction with the local NHS and local authority.
- (d) The establishment of a national Covid testing consortium including all current providers under the auspices, oversight and management of NHS support for those with symptoms, or testing positive, to self-isolate,

including if needed, accommodation, domestic assistance and financial support up to £800.

- 4.3. I think that it is regrettable that the responsibility for communications was taken away from SPI-B & C between the Swine Flu Pandemic and the Covid-19 pandemic starting, especially as Dame Dierdre Hine's independent review of the response to the Swine Flu Pandemic described the communication approach overseen by SPI-B & C as a 'model of best practice for future emergency situations'.
- 4.4. I agree with Dame Dierdre Hine's observation in her independent review into the response to the Swine Flu Pandemic that little use was made of relevant evidence from the behavioural and social sciences in the planning for and management of the 2009 pandemic, and little resource has been invested in building or translating the evidence in this area since that pandemic. I also agree with her recommendation that there should be a concerted effort to build relationships between SPI-B & C and Department for Health policy and communications teams so that SPI-B & C's expertise can be used in planning for vaccine updates and other policy issues where a behavioural approach can be helpful. I express these sentiments in my written evidence to the House of Lords Science and Technology Committee Behaviour Change Inquiry, co-written with Dr Alison Bish, dated October 2010. The written evidence can be found at page 54 of the House of Lords compilation document of written evidence to the Inquiry [**SM/09-INQ000145927**].
- 4.5. I have been asked to comment on what I consider was done adequately in relation to the UK's pandemic planning, preparedness and resilience, which I presume refers to the years following H1N1. I do not have enough information to be able to provide a considered response to this. I have also been asked for my views as to whether the work of SAGE and SPI-B & C in contributing to the UK's pandemic planning, preparedness and resilience up to the time the Covid-19 pandemic struck succeeded in their aims. I do not have enough information at hand to be able to provide a considered response on this either.

5: Lessons to be learned for future pandemics

- 5.1. In the future, in addition to investing in public health, the NHS and social care should ensure that there is adequate capacity to deal with future high-consequence infectious diseases, epidemics, pandemics, as well as other whole-system civil emergencies. To do this, the Government should invest in societal infrastructure more generally. This

includes better housing stock to prevent overcrowding, less crowded classrooms with good quality air (ventilation, filtration and/or UV sterilisation), less crowded workplaces with good health and safety provisions (including monitoring and sanctions), public places/shared indoor spaces with minimum health and safety standards, monitoring and sanctions for non-compliance with rules, and digital support for children outside school in case of future necessity (for example, national or local lockdowns). These measures would also help to reduce the huge inequalities, for example between the wealthy and impoverished, white and other ethnic groups, those with stable jobs and housing vs insecure jobs and housing, that were exacerbated by the Government's lack of preparedness, resilience and handling of the pandemic.

- 5.2. An undated SAGE consensus document titled 'Lessons Learned from the Work of SAGE' [SM/10- INQ000145928] that I contributed to stated that 'there needs to be clearer tasking of, and customers for, the behavioural and communications advice and better definition of the behavioural and social science requirements, which would inform decisions on membership of a future SAGE'. I agree with this recommendation. I do not think that taking communications out of the SPI-B & C remit helped this, and I don't think the customers for our work were made any clearer during Covid-19 than in 2009. If anything, it was less clear who our customers were during Covid.

6: Documentation

- 6.1. As I mentioned at paragraph 3.11, SPI-B & C provided H1N1 SAGE with 9 briefings during the H1N1 SAGE activation period. These were on a range of topics including policy on school closure, vaccination, principles of effective communication, lessons learned and the work of SAGE in a severe pandemic. I contributed to all of these briefings. I provide a summary of the briefing papers below:
- a) "Offering vaccination and antiviral treatment to targeted groups: impact and implications for communication" and "The impact on public reaction of the term used to describe targeted groups": These papers were provided to H1N1 SAGE as well as colleagues in Department for Health and Cabinet Office responsible for antiviral and vaccination policy. They were also provided to the Department for Health Communications Directorate.
 - b) "Fraudulent use of the 14-day self-certification of sickness absence: likely scale of problem and measures to reduce the problem": This paper was provided to

colleagues in Department for Health, Cabinet Office and the Department for Work and Pensions for consideration.

- c) "School closure policy during the H1N1 pandemic": This paper was written at the request of the Secretariat. It considered a number of options relating to schools, including factors that may be relevant to parents' attitudes, and communications approaches to address fears and other issues such as social distancing. It was discussed at H1N1 SAGE on 11 August 2009. In addition, the paper was provided to colleagues in Department for Health (including the Communications Directorate), Cabinet Office and the Department of Children, Schools and Families (DCSF).
- d) "Attitudes to being vaccinated against H1N1 (swine flu): implications for communications": A draft of this paper was discussed at a H1N1 SAGE meeting on 15 September 2009. Members were invited to feedback any comments in writing to the Secretariat.
- e) "Planning assumptions communication issues": This paper was concerned with how to communicate the updated planning assumptions for the predicted autumn wave of influenza. It was discussed at a H1N1 SAGE meeting on 3 November 2009.
- f) "SPI Behaviour and Communications group response to consultation document Lessons Learned – Learning from the Pandemic Experience": This concerns lessons that have been learned from the work the SPI B&C group have done in advising H1N1 SAGE and the Department of Health in order to inform future practice. The paper was submitted to H1N1 SAGE on 20 November 2009.
- g) "How a pandemic of severe impact might affect the work of SAGE: Response of SPI B&C sub-group": This paper was submitted to the Secretariat on 7 December 2009.
- h) "Principles of effective communication": This was a paper about good communication practice. It was circulated to the SPI B&C committee in February 2010.

6.2. As mentioned at paragraph 3.11, I hold a document containing all these papers [SM/06- INQ000145924].

6.3. I provided written evidence to the House of Lords Science and Technology Committee's Inquiry into Behaviour Change. I co-authored this written evidence with

Dr Alison Bish. It is referred to above at paragraph 4.4 as [SM/09- INQ000145927]. The written evidence, which includes a number of questions and answers, summarises some key behavioural issues arising in the UK from the outbreak of the Swine Flu in May 2009. It also contains some criticisms of H1N1 SAGE. I provided more general oral evidence about the topic of behaviour change to the Inquiry, which was not specific to the Swine Flu pandemic [SM/11- INQ000145929]. I also gave an interview to Dame Dierdre Hine for the Independent Review into the response to the Swine Flu Pandemic, but I did not provide any written evidence. As far as I can recall, I would have spoken to the relevant SPI-B & C paper and answered any questions Dame Hine asked me. I presume her interviews were recorded, but I cannot be sure of this. I do not hold any documentation about the interview I gave.

6.4. I also hold the following documentation which may be of interest to the Inquiry:

- a) A OneDrive folder titled 'H1N1 Pandemic' containing several hundred documents related to my work on H1N1 SAGE. I can provide the Inquiry with this folder upon request.
- b) A document listing excerpts mentioning the word 'behaviour' extracted from Dame Dierdre Hines' independent review into the response to the Swine Flu Pandemic. I can provide the Inquiry with a copy of this document upon request.

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.

Name: Professor Susan Michie

Personal Data

Signed:

Dated: 14 April 2023

