UK COVID-19 Inquiry: Module 2 - Rule 9 Request to Professor Martin McKee - Reference: M2/ISAGE/01/PMMK

**1. A brief overview of your qualifications, career history, professional expertise and major publications.**

*Qualifications:* MB BCh BAO Queen's University of Belfast 1979; MRCP (UK) 1982; MSc in Community Medicine, University of London 1986; MFPH 1988; Specialist accreditation in community medicine May 1989; MD 1990; DSc 2006
Career history: Main post - Professor of European Public Health at the London School of Hygiene and Tropical Medicine (LSHTM) since 1997. Previously senior lecturer and later reader at LSHTM 1990-1997, and training posts in internal and public health medicine prior to that.

*Other current roles:* Honorary consultant, University College London Hospital NHS Trust; Medical Director LSHTM; Research Director European Observatory on Health Systems and Policies (a partnership posted by WHO); Member, EU Expert Panel on Effective Ways of Investing in Health; President, British Medical Association.

*Professional expertise:* I trained in internal medicine and then public health medicine. Since 1990 I have led a major programme of work on the health impact of large scale social, economic, and political change. This began with the collapse of communism in Europe and continued with the 2008 global financial crisis and then the COVID-19 pandemic. I have also made major contributions in the area of health systems research, including (with Ellen Nolte) developing the measure of avoidable mortality used by the Global Burden of Disease study, OECD, and the Commonwealth Fund in the US, among others. As I am researching complex topics, my work is transdisciplinary, integrating different perspectives and using multiple methods. I have published over 1,400 papers in peer-reviewed journals and am in the top 1% of scientists worldwide measured by citations (Clarviate). My contributions have been recognised by, among others, six honorary doctorates and election to the UK Academy of Medical Sciences, Academia Europaea, and the US National Academy of Medicine.

During the pandemic. I have been a member of Independent SAGE (see below) and, in my role as a member of the EU Expert Panel on Effective Ways of Investing in Health, have contributed to a series of reports for the European Commission. These include reports on resilience of health systems, protecting mental health of health workers during the pandemic, and public procurement (which included a major section on procurement during the pandemic), on which I was the co-rapporteur. In my role as Research Director of the European Observatory, I was responsible for the COVID-19 Health System Response Monitor (https://eurohealthobservatory.who.int/monitors/hsrm/) , a resource that has collated information on national responses to COVID-19, run in partnership with WHO and the European Commission. As health adviser to the WHO Regional Director for Europe, I was invited to be a member of the Pan-European Commission on Health and Sustainable Development in the Light of the Pandemic, chaired by Professor Mario Monti, in which role I led the drafting of the report and wrote the evidence review that underpinned it. This work is being taken forward by WHO, where I continue to play a major role.See:
https://www.who.int/europe/groups/pan-european-commission-on-health-and-sustainable-development

*Publications*: a selection of relevant ones include:

1. Douglas M, Katikireddi SV, Taulbut M, McKee M, McCartney G. How can we protect against the wider health impacts of the COVID-19 pandemic response? Social distancing may cause significant adverse effects on health inequalities. BMJ 2020; 369: m1557
2. Rajan S, Cylus J, McKee M. What do countries need to do to implement effective 'find, test, trace, isolate, support' systems? J Roy Soc Med 2020; 113: 245–250
3. Clark A, Jit M, Warren-Gash C, Guthrie B, Wang HHX, Mercer SW, Sanderson C, McKee M, Troeger C, Ong KI, Checchi F, Perel P, Joseph S, Gibbs HP, Banerjee A, Eggo RM, CMMID COVID-19 working group. Global, regional, and national estimates of the population at increased risk of severe COVID-19 due to underlying health conditions in 2020: a modelling study. Lancet Global Health 2020; 8: E1003-E1017
4. Roberts CM, Levi M, McKee M, Schilling R, Lim WS, Grocott M. COVID-19: a complex multi-system disease Br J Anaesthesia 2020; 125: 238-242
5. Vanoni M, McKee M, Bonell C, Semenza J, Stuckler D. Using volunteered geographic information to assess mobility in the COVID-19 pandemic context: cross-city time series analysis of 41 cities in 22
6. Rajan S, Comas-Herrera A, McKee M. Did the UK government really throw a protective ring around care homes in the COVID-19 pandemic? J Long-Term Care 2020; 2020: 185-195.
7. Han E, Tan MMJ, Turk E, Sridhar D, Leung GM, Shibuya K, Asgari N, Oh J, García-Basteiro AL, Hanefeld J, Cook AR, Hsu LY, Teo YY, Heymann D, Clark H, McKee M, Legido-Quigley H. Lessons learnt from easing COVID-19 restrictions: an analysis of countries in Asia Pacific and Europe. Lancet 2020: 396: 1525-1534
8. Kontis V, Bennett JE, Rashid T, Parks RM, Pearson-Stuttard J, Guillot M, Asaria P, Zhou B, Battaglini M, Corsetti G, McKee M, Di Cesare M, Mathers CD, Ezzati M. Magnitude, demographics and dynamics of the effect of the first wave of the COVID-19 pandemic on all-cause mortality in 21 industrialized countries. Nature Med 2020; 26: 1919-1928
9. Crozier A, Rajan S, Buchan I, McKee M. Put to the test: use of rapid testing technologies for covid-19. BMJ 2021;372:n208
10. Koltai J, Toffolutti V, McKee M, Stuckler D. Prevalence and changes in food-related hardships by socioeconomic and demographic groups during the COVID-19 pandemic in the UK: A longitudinal panel study. Lancet Reg Health Europe 2021; 6: 100125
11. Mansfield KE, Mathur R, Tazare J, Henderson AD, Mulick A, Carreira H, Matthews AA, Bidulka P, Gayle A, Forbes H, Cook S, Wong AYS, Strongman H, Wing K, Warren-Gash C, Cadogan SL, Smeeth L, Hayes JF, Quint JK, McKee M, Langan SM. COVID-19 collateral: Indirect acute effects of the pandemic on physical and mental health in the UK. Lancet Digital Health 2021; 3: E217-E230
12. Chung SC, Marlow S, Tobias N, Alogna A, Alogna I, You S-L, Khunti K, McKee M, Michie S, Pillay D. Lessons from countries implementing find, test, trace, isolation and support policies in the rapid response of the COVID-19 pandemic: a systematic review. BMJ Open 2021;11:e047832.
13. Oh J, Lee HWJ, Long KQ, Markuns JF, Bullen C, Artaza Barrios OE, Hwang SS, Suh YS, McCool J, Kachur P, Chan CC, Kwon S, Kondo N, Minh HV, Moon JR, Rostila M, Norheim OF, You M, Withers M, Li M, Lee E-J, Benski C, Park S, Nam E-W, Gottschalk K, Kavanagh M, Huong TTG, Lee J-K, Subramanian SV, McKee M, Gostin LO. Mobility restrictions were associated with reductions in COVID-19 incidence early in the pandemic: evidence from a real-time evaluation in 34 countries. Sci Rep 2021; 11, 13717
14. Ahmad R, Atun RA, Birgand G, Castro-Sánchez E, Charani E, Ferlie EB, Hussain I, Kambugu A, Labarca J, Levy Hara G, McKee M, Mendelson M, Singh S, Varma J, Zhu NJ, Zingg W, Holmes AH, COMPASS study group. Macro level influences on strategic responses to the COVID-19 pandemic – an international survey and tool for national assessments. J Global Health 2021;11:05011.

15. van Schalkwyk MC, Maani N, Cohen J, McKee M, Petticrew M. Our Postpandemic Word: What Will it Take to Build a Better Future for People and Planet? Milbank Q. 2021; 99(2): 467-502
16. Oroszi B, Juhász A, Nagy C, Horváth JK, McKee M, Ádány R. The unequal burden of COVID-19 in Hungary: a geographical and socioeconomic analysis of the second wave of the pandemic. BMJ Global Health 2021; 6: e006427.
17. McNamara C, McKee M, Stuckler D. Precarious employment and health in the context of COVID-19: a rapid scoping umbrella review. Eur J Publ Health 2021; 31 (Suppl 4): iv40-iv49
18. Gurdasani D, Bhatt S, Costello A, Denaxis S, Flaxman S, Greenhalgh T, Griffin S, Hyde Z, Katzourakis A, McKee M, Michie S, Ratmann O, Reicher S, Scally G, Tomlinson C, Yates C, Ziauddeen H, Pagel C. Vaccinating adolescents in England: a risk-benefit analysis. J Roy Soc Med 2021: 114: 513–524
19. Sempé L, Lloyd-Sherlock P, Martínez R, Ebrahim S, McKee M, Acosta E. Estimation of all-cause excess mortality by age-specific mortality patterns for countries with incomplete vital statistics: a population-based study of the case of Peru during the first wave of the COVID-19 pandemic. Lancet Reg Health Americas 2021; 2: 100039
20. Timonin S, Klimkin I, Shkolnikov VM, Andreev E, McKee M, Leon DA. Excess mortality in Russia and its regions compared to high income countries: An analysis of monthly series of 2020. Soc Sci Med Pop Health 2022; 17: 101006.
21. Serrano-Alarcón M, Kentikelenis A, McKee M, Stuckler D. Impact of COVID-19 lockdowns on mental health: Evidence from a quasi-natural experiment in England and Scotland. Health Econ 2022; 31: 284–296.
22. Khetan AK, Yusuf S, Lopez-Jaramillo P, Szuba A, Orlandini A, Mat-Nasir N, Oguz A, Gupta R, Avezum A, Rosnah I, Poirier P, Teo KK, Wielgosz A, Lear SA, Palileo-Villanueva LM, Serón P, Chifamba J, Rangarajan S, Mushtaha M, Mohan D, Yeates K, McKee M, Mony PK, Walli-Attaei M, Khansaheb H, Rosengren A, Alhabib KF, Kruger IM, Paucar M-J, Mirrakhimov E, Assembekov B, Leong DP. Variations in the financial impact of the COVID-19 pandemic across 5 continents: A cross-sectional, individual level analysis. eClinicalMedicine 2022; 44: 101284
23. Abba-Aji M, Stuckler D, Galea S, McKee M. Ethnic/racial minorities' and migrants' access to COVID-19 vaccines: A systematic review of barriers and facilitators. J Migration Health; 5: 100086
24. Oroszi B, Juhász A, Nagy C, Horváth KJ, Komlós KE, Túri G, McKee M, Ádány R. Characteristics of the third COVID-19 pandemic wave with special focus on socioeconomic inequalities in morbidity, mortality, and the uptake of COVID-19 vaccination in Hungary. J Personalised Med 2022; 12: 388.
25. Kontis V, Bennett JE, Parks RM, Rashid T, Pearson-Stuttard J, Asaria P, Zhou B, Guillot M, Mathers CD, Khang YH, McKee M, Ezzati M. Lessons learned and lessons missed: impact of the coronavirus disease 2019 (COVID-19) pandemic on all-cause mortality in 40 industrialised countries and US states prior to mass vaccination. Wellcome Open Res. 2022; 6: 279.
26. Arnold KF, Gilthorpe MS, Alwan NA, Heppenstall AJ, Tomova GD, McKee M, Tennant PWG. The human cost of inaction: A counterfactual analysis of the effect of lockdown timing on COVID-19
27. Mendez-Lopez A, Stuckler D, McKee M, Semenza JC, Lazarus JV. The mental health crisis during the COVID-19 pandemic in older adults and the role of physical distancing interventions and social protection measures in 26 European countries. SSM Pop Health 2022; 17: 101017
28. Shkolnikov VM, Klimkin I, McKee M, Jdanov DA, Galarza AA, Németh L, Timonin SA,. Nepomuceno MR, Andreev EM, Leon DA,. What should be the baseline when calculating

excess mortality? New approaches suggest that we have underestimated the impact of the COVID-19 pandemic and previous winter peaks. Soc Sci Med Pop Health 2022; 18: 101118
29. Rajan S, McKee M, Hernández-Quevedo C, Karanikolos M, Richardson E, Webb E, Cylus J, What have European countries done to prevent the spread of COVID-19? Lessons from the COVID-19 Health System Response Monitor. Health Policy 2022; 126: 355–361
30. De Foo C, Haldane V, Jung A-S, Grépin KA, Wu S, Singh S, Perera N, Miranda J, McKee M, Legido-Quigley H. Isolation facilities for COVID-19: Towards a person-centred approach. BMJ 2022; 378: 069558
31. Gurdasani D, Pagel C, McKee M, Michie S, Greenhalgh T, Yates C, Scally G, Ziauddeen H. COVID-19 in the UK: Policy on children and schools. BMJ 2022; 378:e071234
32. Gruszczynski L, Zatonski M, McKee M. Do regulations matter in fighting the COVID-19 pandemic? Lessons from Poland. Eur J Risk Regulation 2021; 12(4), 739-757.

**2. An outline of when you participated in Independent SAGE, the role that you performed and any matters that you advised on.**

I have been a member of Independent SAGE from its inception. I briefly assumed the role of chair in early 2022 but stepped back after a few months because of pressure of work. Reflecting my roles and research set out in the previous sections, my major contribution has been to provide an international perspective. Thus, I have been able to provide insights into the epidemiology of the pandemic in other countries and into the policy responses that they have adopted. I have drawn, particularly, on the evidence that we have gathered in the European Observatory monitor (e.g. papers 2,16,29) and in my collaborations with colleagues in Asia (e.g. papers 7,13,30). More generally, I have contributed a broad public health perspective, with a particular focus on the consequences of restrictions and how any adverse impacts can be mitigated (e.g. papers 11,21,27). These insights informed a number of Independent SAGE reports, such as "A closer look at Sweden's response to COVID-19" (https://www.independentsage.org/wp-content/uploads/2020/09/Sweden_case-study-v2.pdf)

**3. A summary of any reports and/or articles you have written, interviews and/or evidence you have given regarding the work of SAGE and/or its subcommittees and/or the UK's response to the Covid-19 pandemic. Please include links to those documents where possible.**

My main contribution was to lead on a paper on the creation, philosophy, and operation of Independent SAGE: McKee M, Altmann D, Costello A, Friston K, Haque Z, Khunti K, Michie S, Oni T, Pagel C, Pillay D, Reicher S, Salisbury H, Scally G, Yates K, Bauld L, Bear L, Drury J, Parker M, Phoenix A, Stokoe E, West R. Open science communication: the first year of the UK's Independent Scientific Advisory Group for Emergencies. Health Policy 2022; 126: 234-244. The abstract is:

The COVID-19 pandemic has shone a light on the complex relationship between science and policy. Policymakers have had to make decisions at speed in conditions of uncertainty, implementing policies that have had profound consequences for people's lives. Yet this process has sometimes been characterised by fragmentation, opacity and a disconnect between evidence and policy. In the United Kingdom, concerns about the secrecy that initially surrounded this process led to the creation of Independent SAGE, an unofficial group of scientists from different disciplines that came together to ask policy-relevant questions, review the evolving evidence, and make evidence-based recommendations. The group took a public health approach with a population perspective, worked in a holistic transdisciplinary way, and were committed to public engagement. In this paper, we review the lessons learned during its first year. These include the importance of learning from local expertise, the value of learning from other countries, the role of civil society as a critical friend to

government, finding appropriate relationships between science and policy, and recognising the necessity of viewing issues through an equity lens.

This paper has an extensive discussion on the role of scientific advice in policy. This draws extensively on my experience, in over 20 years, as Research Director in the European Observatory where we have contributed to almost every EU Presidency, with numerous tangible impacts on EU policy, as well as my close work with ministers and their advisers in other European countries, again with demonstrable policy impact. This experience has convinced me that it is essential to develop trusted relationships between scientists and policymakers, with the former informed by knowledge of the legal, political, and cultural context and of the reality for those who will be affected by the advice. I reject totally the view that scientists should simply be there to answer questions posed by ministers without the ability to engage in a discussion of whether these are the right questions.

4. Your views as to whether the work of SAGE and/or its subcommittees in responding to the Covid-19 pandemic (or the UK's response more generally) succeeded in its aims. We have previously invited independent members of SAGE and its subcommittees to address this issue by reference to the matters set out below. You may find them of assistance, although we recognise that some are likely to be beyond your knowledge. Please address this issue as you see fit.

**a. The composition of the groups and/or their diversity of expertise;**

I felt that there were three important weaknesses in the composition of the groups advising government. First, while the basic science is, of course, universally applicable, there was very little evidence of learning from elsewhere. This has already been noted by the joint report of the Commons Science and Technology, and Health and Social Care committees, which commented that the "unwillingness to consider seriously and act on the approach being taken in Taiwan, Singapore or Korea was a serious error". Sir Jeremy Farra has said that "I wish SAGE had drawn on a wider group of experts with first-hand insights from China and the surrounding region". Given that we in the European Observatory had established extensive network covering most of Europe and key countries elsewhere, a network that was being used extensively by WHO, the European Commission, many overseas governments, it was disappointing that neither it or other sources of international evidence seem to be included in the decision-making process. As someone in very regular, often daily or weekly, contact with senior health officials in other European countries, I was aware of the surprise that they had about the lack of contact with individuals in the UK. There were, of course, a few personal relationships between scientists, for example, with their counterparts in the Robert Koch Institute, but these were relatively few. At times, this had important consequences. Thus, in the very early days of the pandemic I understand from an Italian colleague that the scale of the problems they were facing only became clear to the UK almost by chance, during a G7 call. As far as I am aware, very little use was made of the resources of the FCDO, even though our embassies are very well placed to provide local information. At times, this had important consequences, as when France was put on the Amber Plus list. This was a mystery to many observers, although the media reports at the time were incorrect in thinking that it was due to the inclusion of data from La Reunion and Mayotte (it was not). Instead, it seems to have been a misreading of the GISAID webpage that could easily have been resolved by contact with French authorities (in fact, working with a French colleague, we were quickly able to identify where the problem lay).

The second weakness was the lack of intelligence about the reality on the frontline. In my research I have placed a high priority on co-creation of solutions, working with those affected by policies to understand the practical consequences. There were many examples. Better communication with laboratory scientists would have identified the problems with the Immensa laboratory. As Professor

Alan McNally said "You shouldn't be relying on anecdotal reports to spot a problem of this size. That's the unforgivable thing about this ...I don't think it's going too far to say that an absolute failure of quality in that lab is going to lead to very serious illnesses, maybe hospitalisations, and maybe worse." Local authority public health teams were excluded from discussions about test and trace. Frontline NHS workers could have advised about the folly of creating Nightingale hospitals in the context of existing staff shortages. Patients, and in particular those with Long COVID, have felt ignored. Income support policies paid scant regard to the lived reality of those in precarious employment. The Commons Health and Social Care committee said "SAGE either did not have sufficient representation from social care or did not give enough weight to the impact on the social care sector" and John Edmunds has said ""I think sometimes [Sage] were...removed from daily decisions that other organisations were putting in place... I would have liked – personally speaking – a bit more input on the ground. We knew care homes would be a risk. But I remember distinctly the day we first saw the data. Oh my god, there's a hundred or so outbreaks in care homes in the last week. Dreadful. But I don't think we had such good general situational awareness. That background to it. We were missing that." Procurement experts were sidelined in the scramble to gather PPE (discussed in our report for the European Commission). Schoolteachers felt that the challenges facing them, with high levels of absenteeism by teachers and pupils, and instructions being distributed at the last moment, were not well understood.

The third weakness was a failure to take an interdisciplinary approach. While the highly specialised expertise, in areas such as behavioural science, modelling, or virology, were essential, broadly based public health expertise was largely lacking. Its contribution lies in its ability to integrate evidence from a wide range of qualitative and quantitative research and to apply that research to policy questions. This is not a substitute for the decision-making that is, rightly, the remit of politicians but rather the ability to set out the trade-offs that are involved and to understand how the inevitable adverse consequences of policies that are necessary to control the spread of the virus can be mitigated. This is illustrated by Paper 1, above, which we wrote at the very beginning of the pandemic. We have been very clear that there was a need for rapid action to curb transmission (and indeed, in paper 26, above, show that the delay in acting contributed to a very large number of unnecessary deaths). However, as we showed in Paper 1, we could anticipate many adverse consequences that could have been minimised by appropriate action.

**b. The way in which the groups were commissioned to work on the relevant issues;**

I have already addressed this to some extent. SAGE and the other advisory bodies were only able to answer the questions that they were asked. I understand that the idea to model the impact of a lockdown at the beginning of the pandemic came from the modellers advising the government rather than from the government itself. It is important to note that we on Independent SAGE have looked carefully at the advice that we have provided and we can find no substantive issue where we have differed from the advice given by SAGE (although we have taken a very different view from JCVI on childhood vaccines – see Paper 18 above), we differed in that we were able to determine the questions that we would answer. These went beyond the questions posed to SAGE and arose from the issues that were raised with us by the public and by civil society groups. This takes me back to my point about the need for dialogue. My experience in the European Observatory, where we have refined the process of policy dialogues with ministers and their advisers over many years, convinces me that this is a much more effective way of informing policy.

**c. The resources and support that were available;**

I cannot comment on this.

**d. The advice given and/or recommendations that were made;**

As noted above, and recognising the inherent uncertainty at the beginning of the pandemic, I believe that the advice given by SAGE was broadly appropriate, even if limited by the narrow questions that its members were asked. I do, however, have considerable concerns about the advice given by JCVI (see papers 18 and 31 above). I would argue that they approached the issue of vaccinating children with preconceived notions and, while, in general, they did reach the correct conclusion eventually, it was only after much delay and the mixed messages that they gave out likely contributed to vaccine hesitancy.

**e. The extent to which the groups worked effectively together;**

I cannot comment on this from direct experience.

**f. The extent to which applicable structures and policies were utilised and/or complied with and their effectiveness.**

I cannot comment on this.

**5. Your views as to any lessons that can be learned from the UK's response to the Covid-19 pandemic, in particular relating to the work of SAGE and/or its subcommittees. Please describe any changes that have already been made, and set out any recommendations for further changes that you think the Inquiry should consider making.**

To a large extent this is covered in our paper on Independent SAGE, published in the journal Health Policy, and referred to above. However, in brief, I would simply note that there is a large body of literature on scientific advice for policy, in particular in Pielke Jr RA . The honest broker: making sense of science in policy and poli tics. Cambridge University Press; 2007. This is reviewed in the section "Science and Policy" in our paper. This literature has informed other successful advisory mechanisms, in particular, the model that we have used in the European Observatory. It envisages a much closer dialogue between scientists and policymakers than was the case in the UK. This has allowed a few of us to develop very close links with ministers in other European countries, several of whom have made extensive use of work undertaken by Independent SAGE and have looked to us for rapid responses to emerging questions.

**6. A brief description of documentation relating to these matters that you hold (including soft copy material held electronically). Please retain all such material. I am not asking for you to provide us with this material at this stage, but I may request that you do so in due course.**

This is referred to above or is available at https://www.independentsage.org/