Questionnaire UK COVID-19 Inquiry: Module 2 - Rule 9 Request to Mr Hugo Lewkowicz - Reference: M2/SAGE/01/HL Please provide the following information:

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

Qualifications:

- Medicine MbChB – University of Manchester 2014
- Bioinformatics and Systems Biology MSc (Hons) – University of Manchester 2019

Current Employment:

PhD iCASE funded by the Medical Research Council and Danaher - *Data-driven analytics of disease spread under close contact for optimal testing and mitigation* at the University of Manchester, started 2019

I graduated as a medical doctor in 2014 and worked full- and part-time in that career for five years. During this time, I achieve a master's degree in Bioinformatics and Systems Biology. In 2019 I left medicine and am now in my final year of study for a PhD in the modelling of the spread of infectious diseases in close contact environments. I have been a contributing author on the following relevant papers:

- Using statistics and mathematical modelling to understand infectious disease outbreaks: COVID-19 as an example
- Challenges in control of Covid-19: short doubling time and long delay to effect of interventions
- **Rapid increase of Care Homes reporting outbreaks a sign of eventual substantial disease burden**
- **Outbreaks in care homes may lead to substantial disease burden if not mitigated**

2. A list of the groups (i.e. SAGE and/or any of its sub-groups) in which you have been a participant, and the relevant time periods.

- SAGE
- SPI-M
- Social Care Working Group

I am a junior researcher who on occasion would be asked by my supervisors to present some work. This work was presented as "for interest" rather than fully formed research. As a result, I cannot recall with certainty which of the groups I have spoken at. I know that I have presented work at SPI-M, as well as for the social care working group, and have also been in meetings with representatives for the Department of Justice to aid the understanding of CoVid in prisons. In all meetings I was present with at least one of my supervisory team. I base this knowledge on my memory and records from my electronic calendar over this time period. My answers to Question 3 give the exact dates of every group meeting I have been scheduled to attend over this time period

3. An overview of your involvement with those groups between January 2020 and February 2022, including: a. When and how you came to be a participant; b. The number of meetings you attended, and your contributions to those meetings; c. Your role in providing research, information and advice.

Any meetings I attended would have been at the request of one of my supervisors. I believe I attended somewhere between 20 and 50 meetings. The meeting I would attend most regularly would be the social-care working subgroup. I had no specific role in these meetings. If I had research to present, it would have been a "nice-to-know" piece of research, rather than one crucial to the workings of the group. Below is a list of all meetings I attended according to my calendar:

30/3/2020 – HMPPS – Discussion of the modelling of CoVid outbreaks in prisons

15/4/2020 – Modelling Cell meeting Covid19 – Reason unclear

1/5/2020, 8/5/2020, 15/5/2020 – Care Home Analysis – There were reports of outbreaks in carehomes, and work with Ian Hall helped identify how strongly interconnected different care homes were. I was invited to discuss work I had done looking at the interconnectedness of cabins in the Braemar cruise outbreak, and to see if similar work could be applied to care homes. This research turned out not to be relevant.

15/6/2020 – Care Home Working Group Subgroup discussion on risk – Although it is in my calendar, it is unclear if I attended this call

24/6/2020 – Main SPI-M – An update report on weekly R estimates from different research groups. I may have been invited to this talk to talk about rota patterns

From this point onwards, my focus shifts to working with a local hospital trust working on estimating the total number of nosocomial infections occurring in hospital. Whilst I still have some care home meetings scheduled, my presence was not required and so I stopped attending the meetings.

8/2/2021, 17/2/2021, 3/3/2021 – Reverse Cohorting Units – Lorenzo Pellis, Jacob Curran-Sebastian and myself are asked to generate models to advise on "reverse cohorting" in prisons by Oscar O'Mara (I believe representing the DoJ). This would be a process in which new prisoners would be segregated for a period of time before joining the general prison population. I do not remember our full response, although I believe we said any such intervention needs to be done with caution. I do not know the real-world outcome from this

4. A summary of any documents to which you contributed for the purpose of advising SAGE and/or its related subgroups on the Covid-19 pandemic. Please include links to those documents where possible.

See papers above. Additionally, I presented some work on using rota patterns to limit how long an individual would spend at work whilst infectious. An informal write-up of this can be provided on request

5. A summary of any articles you have written, interviews and/or evidence you have given regarding the work of the above-mentioned groups and/or the UK's response to the Covid-19 pandemic. Please include links to those documents where possible.

I had a brief video interview by the University of Manchester's engagement team in order to talk about real-life application of people's research

6. Your views as to whether the work of the above-mentioned groups in responding to the Covid-19 pandemic (or the UK's response more generally) succeeded in its aims. This may include, but is not limited to, your views on: a. The composition of the groups and/or their diversity of expertise; b. The way in which the groups were commissioned to work on the relevant issues; c. The resources and support that were available; d. The advice given and/or recommendations that were made; e. The

extent to which the groups worked effectively together; f. The extent to which applicable structures and policies were utilised and/or complied with and their effectiveness.

I'm afraid I was not involved with the groups enough to be able to cast a fair comment either way. From what I observed, they were all appropriate and dedicated to their goals. Aside from that I cannot be helpful

7. 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 the above-mentioned groups. 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.

As above. I would like to say that there was a general misunderstanding as to the role of modelling in data interpretation coming from individuals not familiar with the process. There appeared to be a common belief that a complicated model is a sufficient replacement for a lack of data. In truth, whilst a good model can optimise the amount of information that can be gained from a limited dataset, it is not a replacement for accurate data. Additionally, we cannot know if a model is good without data to validate against.

8. 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.

Any comments I have made today are based on going through my electronic calendar for the time period in question. I have a number of Latex documents of the work that I have done, which I am currently collating into my PhD thesis