

UK Covid-19 Public Inquiry Response - Dr Daniel Leightley

Formal response to the UK Covid-19 Inquiry by Dr Daniel Leightley member of the Independent Scientific Pandemic Insights Group on Behaviours (SPI-B).

Please see e-mail for cover letter response.

Overview of Qualifications

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

Response: I obtained my PhD - specialising in machine learning in health - from Manchester Metropolitan University (London, UK) in 2015. Additional qualifications include an MSc in Computing, and a BSc in Information and Communications (Hons), both awarded from Manchester Metropolitan University (Manchester, UK). I am an Associate Fellow of the Higher Education Academy, and a member of the Institute of Electrical and Electronics Engineers (IEEE).

I am a Research Fellow based at the King's Centre for Military Health Research (KCMHR; King's College London) and the Department of Psychological Medicine (King's College London) where I have worked since 2015. My role at KCMHR is to lead the research and development of digital therapeutic technologies to support, manage and improve the health and well-being of the UK Armed Forces Community. My work is predominantly focused on the use of behaviour change theory and techniques to promote positive healthy changes in behaviour.

Since joining KCMHR I have obtained a significant amount of research income which includes funding from the UK Medical Research Council, US Department of Defence, and the Forces in Mind Trust. The majority of this funding is to undertake remote monitoring of individuals focusing on their health, and research and development of clinical interventions for conditions including alcohol misuse, suicide and depression.

A career highlight is the public release of DrinksRation (www.drinksration.app). DrinksRation is a brief alcohol intervention using behaviour change theory to promote positive changes in behaviour. It is currently available to the public, and being trialed across active duty military personnel in the UK. Future work will also trial the app in the United States of America, and Canada. I have also been involved in the following Covid-19 studies:

- KCL TEST: A Covid-19 testing programme across the King's College London community which offered and performed over 150,000 tests. My role was to lead the technology aspect, and to contribute to communications and epidemiological research;
- KCL CHECK: Staff and postgraduate research students at King's were invited to participate in KCL CHECK, a research study seeking to understand the impact of the Covid-19 pandemic on the King's community. My role was to lead on the technology aspect, data collection, results synthesis and dissemination;
- NHS CHECK: NHS staff of all levels were invited to take part in a longitudinal mental health study assessing the impact of Covid-19. My role was to support initial setup, as NHS CHECK was underpinned by KCL CHECK.

A list of major publications are outlined below (highlighted headings are clickable):

- [Evaluating the efficacy of a mobile app \(Drinks:Ration\) to reduce alcohol consumption in a help-seeking military veteran population: Randomised Controlled Trial](#). Daniel Leightley, Charlotte Williamson, Roberto Rona, Ewan Carr, James Shearer, Jordan D. Davis, Amos Simms, Nicola T. Fear, Laura Goodwin and Dominic Murphy. *Journal of Internet Medical Research: mHealth & uHealth*, 2022.
- [Recruiting Military Veterans into Alcohol Misuse Research: The Role of Social Media and Facebook Advertising](#). Charlotte Williamson, Roberto J. Rona, Amos Simms, Nicola T. Fear, Laura Goodwin, Dominic Murphy and Daniel Leightley, *Telemedicine and e-Health*, 2022.
- [Investigating the impact of COVID-19 lockdown on adults with a recent history of recurrent major depressive disorder: a multi-Centre study using remote measurement technology](#). Daniel Leightley, Grace Lavelle, Katie M White, Shaoxiong Sun, Faith Matcham, Alina Ivan, Carolin Oetzmann, Brenda WJH Penninx, Femke Lamers, Sara Siddi, Josep Mario Haro, Inez Myin-Germeys, Stuart Bruce, Raluca Nica, Alice Wickersham, Peter Annas, David C. Mohr, Sara Simblett, Til Wykes, Nicholas Cummins, Amos Akinola Folarin, Pauline Conde, Yatharth Ranjan, Richard JB Dobson, Viabhav A Narayan, Mathew Hotopf, on behalf of the RADAR-CNS Consortium. *BMC Psychiatry*, 2021.
- [The Development of the Military Service Identification Tool: Identifying Military Veterans in a Clinical Research Database using Natural Language Processing and Machine Learning](#). Daniel Leightley, David Pernet, Sumithra Velupillai, Robert J. Stewart, Katharine M. Mark, Elena Opie, Dominic Murphy, Nicola T. Fear, Sharon A.M. Stevelink. *JMIR Medical Informatics*, 2020.
- [Integrating Electronic Healthcare Records of Armed Forces Personnel: Developing a framework for evaluating health outcomes in England, Scotland and Wales](#). Daniel Leightley, Zoe Chui, Margaret Jones, Sabine Landau, Paul McCrone, Richard D. Hayes, Simon Wessely, Nicola T. Fear and Laura Goodwin. *International Journal of Medical*

Informatics, 2018.

You can see a full list of my publications [here](#).

SAGE Groups Membership

Question: 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.

Response: I was a member of the SPI-B group between March 2020 into early 2021. I am unable to provide a specific end date of my involvement as there was no end date.

It is important to note that my involvement in SPI-B was at a junior level.

Overview of Involvement

Question: An overview of your involvement with those groups between January 2020 and February 2022, including:

- When and how you came to be a participant;
- The number of meetings you attended, and your contributions to those meetings;
- Your role in providing research, information and advice.

Response: I was invited to join the SPI-B group by Professor James Rubin on the recommendation of Professor Matthew Hotopf. My role was to support Professor Rubin and the wider team by conducting literature review, ad-hoc review of documentation, and general input based on my skillset and knowledge. In total I attended approximately seven meetings. I am unable to recall my specific contributions to those meetings as I do not have access to meeting minutes, and my own notes do not reflect my own personal contributions. However, I did contribute research, information and advice as requested by senior colleagues, and based on my own understanding.

Document Support

Question: 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.

Response: To the best of my knowledge after reviewing my emails and other available resources, I contributed to and/or had sight of documents with the following titles:

- The impact of unplanned school closure on children's social contact: Rapid evidence

- review;
- How to help children and parents after a School closure.
 - Adherence literature;
 - Options for increasing adherence to social distancing measures;
 - Current Adherence to Behavioural and Social Interventions in the UK: Comments from SPI-B [21 March 2020];
 - DECISION ON SOCIAL DISTANCING - Draft Options;
 - Easing restrictions on activity and social distancing: comments and suggestions from the SPI-B panel;
 - Antibody Tests: Note on Misclassification, Misunderstanding, Misuse and Mitigation to Realise Benefits and Minimize Harms;
 - Strategic Questions for SAGE;
 - Funerals and Public Consensus: how to prevent distrust and disorder due to government burial regulations;
 - Impact of Framing of Antibody Tests on understanding of antibody positive test results;
 - Behavioural principles for updating guidance and support for infection control in the community;
 - Advice on the preferred enforcement approach to protests while social contact is restricted;
 - SPI-B executive summary - Household Support Network Interventions (Bubbles).
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Interviews Given

Question: 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.

Response: I have provided no formal/on the record interviews to any organisation or media outlet as a direct result of my involvement with SPI-B. However, as part of my wider research work I have published the following research Covid-19 related research articles (highlighted headings are clickable):

- [Indicators of recent COVID-19 infection status: Findings from a large occupational cohort of staff and postgraduate research students from a UK university](#). Katrina A. S. Davis, Ewan Carr, Daniel Leightley, Valentina Vitiello, Gabriella Bergin-Cartwright, Grace Lavelle, Alice Wickersham, Michael H. Malim, Carolin Oetzmann, Catherine Polling, Sharon A.M Stevelink, Reza Razavi, Matthew Hotopf, On behalf of the KCL CHECK research team. *BMC Public Health*, 2022.
- [Trajectories of mental health among UK university staff and postgraduate students](#)

during the pandemic. Ewan Carr, Carolin Oetzmann, Katrina Davis, Gabriella Bergin-Cartwright, Sarah Dorrington, Grace Lavelle, Daniel Leightley, Catherine Polling, Sharon Stevelink, Alice Wickersham, Valentina Vitiello, Reza Razavi and Matthew Hotopf. *Occupational and Environmental Medicine*, 2022.

- **Mental health among UK university staff and postgraduate students in the early stages of the COVID-19 pandemic.** Ewan Carr, Katrina Davis, Gabriella Bergin-Cartwright, Grace Lavelle, Daniel Leightley, Carolin Oetzmann, Catherine Polling, Sharon A. M. Stevelink, Alice Wickersham, Reza Razavi and Matthew Hotopf. *Occupational and Environmental Medicine*, 2021.
- **Investigating the impact of COVID-19 lockdown on adults with a recent history of recurrent major depressive disorder: a multi-Centre study using remote measurement technology.** Daniel Leightley, Grace Lavelle, Katie M White, Shaoxiong Sun, Faith Matcham, Alina Ivan, Carolin Oetzmann, Brenda WJH Penninx, Femke Lamers, Sara Siddi, Josep Mario Haro, Inez Myin-Germeys, Stuart Bruce, Raluca Nica, Alice Wickersham, Peter Annas, David C. Mohr, Sara Simblett, Til Wykes, Nicholas Cummins, Amos Akinola Folarin, Pauline Conde, Yatharth Ranjan, Richard JB Dobson, Viabhav A Narayan, Mathew Hotopf, on behalf of the RADAR-CNS Consortium. *BMC Psychiatry*, 2021.
- **The psychosocial impact of the COVID-19 pandemic on 4,378 UK healthcare workers and ancillary staff: initial baseline data from a cohort study collected during the first wave of the pandemic.** Danielle Lamb, Sam Gnanapragasam, Neil Greenberg, Rupa Bhundia, Ewan Carr, Matthew Hotopf, Reza Razavi, Rosalind Raine, Sean Cross, Amy Dewar, Mary Docherty, Sarah Dorrington, Stephani L Hatch, Charlotte Wilson-Jones, Daniel Leightley, Ira Madan, Sally Marlow, Isabel McMullen, Anne Marie Rafferty, Martin Parsons, Catherine Polling, Danai Serfioti, Peter Aitken, Veronica French, Helen Gaunt, Joanna Morris-Bone, Rachel Harris, Chloe Simela, Sharon A M Stevelink, Simon Wessely. *Occupational and Environmental Medicine*, 2021.
- **Changes in physical activity among United Kingdom university students following the implementation of coronavirus lock-down measures.** Alice Wickersham, Ewan Carr, Ryan Hunt, Jordan P. Davis, Matthew Hotopf, Nicola T. Fear, Johnny Downs and Daniel Leightley. *International Journal of Environmental Research and Public Health*, 2021.

Note: A PDF copy of each article can be provided upon request.

Personal View on Covid-19 Response

Question: 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:

- The composition of the groups and/or their diversity of expertise;

- The way in which the groups were commissioned to work on the relevant issues;
- The resources and support that were available;
- The advice given and/or recommendations that were made;
- The extent to which the groups worked effectively together;
- The extent to which applicable structures and policies were utilised and/or complied with and their effectiveness.

Response: It is my view that the overall response of the UK Government during the early phase of the Covid-19 pandemic (defined as February 2020 to May 2020) was effective considering what was known at the time. Further, I believe that during this phase, the UK Government acted in a genuine manner in its attempts to understand, distil and implement advice provided by multiple advisory committees to limit the spread of Covid-19. I have provided more specific comments on the response of SPI-B below.

Composition: The overall composition of SPI-B was acceptable for achieving the intended aim, that is, to provide the UK Government with advice on human behaviours. However, it is my view that the group would have benefited from a wider geographical representation, ethnic diversity and individuals with lived experience.

Commissioning Work: During the early phase of the pandemic, all work was shared among the group as a whole, with information shared via an email mailing list, and the group having an opportunity to contribute. Relevant input was then collated and stored on SharePoint. However, due to media leaks/briefings, it was decided by the co-chairs of SPI-B that tasks and work would be allocated based on specialty and skill set. This obscured some work activities from the wider group, and created some confusion on our purpose and mission due to not being aware of others work.

Resources and Support: SPI-B received significant support from the Cabinet Office, both in terms of delivering on tasks (ie. advice, guidance and data), but also pastoral care as a result of increased media scrutiny and focus. This often was reactionary to wider events, but welcomed by the group.

Advice and Recommendations: On the whole, the advice and recommendations provided were politically and ideologically agnostic and focused on saving as many lives as possible. The recommendations provided were fed into the main SAGE group for further consideration and presentation to the UK Government.

Effective Working: In the early stages of the pandemic, SPI-B members worked incredibly hard to understand the spread of Covid-19, and to provide effective recommendations.

The way in which the group worked was fast paced but effective.

The ultimate aim of SPI-B was to provide guidance to the UK Government on approaches which could be taken to communicate the threat of Covid-19, and to promote changes in behaviour accordingly. Overall, it is my view that SPI-B succeeded in this aim.

Lessons to be Learnt

Question: 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.

Response: As indicated, the early role played by SPI-B, and particular Professor James Rubin, was pivotal in providing advice and guidance on the spread of Covid-19. I believe that some lessons could be learned in the following areas:

- **Centralisation or Decentralisation:** Decisions by successive UK Governments over the last 20 years have sought to decentralise and devolve health care. This is based on the assumption that decentralisation enables local and regional health authorities to focus and prioritise the needs of the communities they represent. During the pandemic, the UK Government pivoted in its approach, and focused on centralisation. While this may have been the correct approach, performing a rapid reorganisation placed a negative strain on resources and created conflict with local health authorities.
- **Data Linkage:** It is important that we leverage the data we currently hold to inform decisions. I do not believe that we sufficiently leveraged, or enabled, mass data linkage to track the spread of Covid-19. The UK Government relied upon initiatives such as the IMPACT study and ZOE app to provide population-level analysis of the Covid-19 spread. Data held by the UK Government (ie. health data, transportation, mobile cell movements) could have been used to augment these independent academic data. Often the barrier to access was regulatory or procedural.
- **Understand Public Attitudes:** Over the course of the pandemic the wider UK public attitude changed as we 'learned to live' with Covid-19. This change was often negative, with the public at large appearing to accept that individuals may die due to Covid-19, but that wider society must return to 'normal'. This change in attitude also contributed to the prevalence of Covid-19 in the later phase of the pandemic. Work should be undertaken to understand how and why public attitudes changed in this way.

In relation to SPI-B specifically, I believe that the role of scientific advisory groups should be to advise Government on the options available to them, and not to make policy

decisions. However, from my perspective, senior academic colleagues did unfortunately sometimes seek to direct and influence policy via 1) SPI-B, 2) social media, and 3) direct or indirect media briefings. This created a disconnect within the group and possibly fostered and promoted divergence of public opinion. This should be considered and addressed in future, perhaps via rigorous Terms of Reference or closer oversight and scrutiny.

On a personal note, it must be acknowledged that many academics, like myself, joined the advisory groups to make positive changes to the community. It is unfortunate, that because of media hype on membership of SAGE related groups, my name was published, and I had journalists attempt add me on Instagram, Facebook and Strava. This type of invasion of privacy isn't acceptable and should be addressed by any committee findings.

Further, it should be acknowledged that time spent by academics on Covid-19 advisory work was not paid for or covered by Government funding/support. It was often done at their expense, or in addition to other commitments.

Documents Help

Question: 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.

Response: I hold personal notes, private email exchanges between colleagues and draft policy recommendations. These are held digitally and I will retain them to ensure their availability.

If you have any questions, require further documentation or clarification please do not hesitate to contact me.

Yours sincerely,

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