

Please provide the following information:

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

Undergraduate qualifications:

MBBS with award of Distinction in Clinical Sciences and Merit in Clinical Medicine
University College London (2013)

MA (Cantab.) in Medical Sciences
Churchill College, University of Cambridge (2010)

Postgraduate qualifications:

Wellcome Trust Clinical PhD Fellowship Award Oct 2020 - present
University of Cambridge

Fellow of the Royal College of Pathologists Examinations (FRCPath): Part 1, Mar' 19
Membership of the Royal College of Physicians (MRCP): Apr' 16

Postgraduate training:

I completed Foundation Training and Core Medical Training in the North Central London and North West London training circuits respectively. I am a Higher Specialist Infectious Diseases and Microbiology Trainee in London, and have taken three years out of programme to complete my PhD, "The use of high through-put genomic sequencing to understand transmission and carriage of pathogens", at the University of Cambridge.

Major Publications:

'Equity in recruitment to Combined Infection Training, 2021: Diversity & Inclusion considerations', **Aggarwal D**, Roy-Chowdhury M, Xiang N, Peacock S. *Journal of Infection*. 2022 Jul 5;S0163-4453(22)00405-4. doi: 10.1016/j.jinf.2022.06.031.

'Genomic assessment of quarantine measures to prevent SARS-CoV-2 importation and transmission.' **Aggarwal D**, Page AJ, Schaefer U, et al. *Nature communications*. 2022 Feb 23;13(1):1-3.

'Genomic epidemiology of SARS-CoV-2 in a UK university identifies dynamics of transmission.' **Aggarwal D**, Warne B, Jahun AS, et al. *Nature communications*. 2022 Feb 8;13(1):1-6.

'The role of viral genomics in understanding COVID-19 outbreaks in long-term care facilities.' **Aggarwal D**, Myers R, Hamilton WL, et al. *Lancet Microbe*. 2021 Sep 29. doi: 10.1016/S2666-5247(21)00208-1.

'Clinical outcomes and outcome measurement tools reported in randomised controlled trials of treatment for snakebite envenoming: A systematic review.' Abouyannis M, **Aggarwal D**, Laloo DG, Casewell NR, Hamaluba M, et al. (2021). *PLOS Neglected Tropical Diseases* 15(8): e0009589. doi: 10.1371/journal.pntd.0009589

'Genomic epidemiology of COVID-19 in care homes in the east of England.' *Elife*. 2021 Mar 2;10:e64618. Hamilton WL, Tonkin-Hill G, Smith ER, **Aggarwal D** et al. doi: 10.7554/eLife.64618.

'Clinical utility and cost-effectiveness of bacterial 16S rRNA and targeted PCR based diagnostic testing in a UK microbiology laboratory network.' *Nature Scientific Reports*. Mar 2020. *Nature Sci Rep*. 2020 May 14;10(1):7965. **Aggarwal D**, T Kanitkar, M Narouz, B Azadian, L Moore, N Mughal

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.

I was not a formal member of SAGE or any associated sub-group but I did participate in two relevant meetings, limited to the presentation of research findings.

- SAGE: I participated in SAGE 84 (Eighty-fourth SAGE meeting on COVID-19, 25 March 2021).
- SAGE Environmental Modelling Group (SAGE-EMG): I participated at a meeting of the SAGE-EMG working group (April 2021).

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.

SAGE: My involvement was subsequent to conducting research as an honorary employee of UKHSA (formerly PHE), a member of COG-UK, and an employee of the University of Cambridge. I participated in SAGE 84 (Eighty-fourth SAGE meeting on COVID-19, 25 March 2021). My contribution was limited to a 5-minute presentation of findings from research.

SAGE Environmental Modelling Group (SAGE-EMG): My involvement was subsequent to conducting research as an honorary employee of UKHSA (formerly PHE), a member of COG-UK, and an employee of the University of Cambridge. I participated at one meeting of the SAGE-EMG working group (April 2021). My contribution was limited to a 5-minute presentation of findings from research.

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.

- a. Details of the work entitled, "COG-UK: Impact of travel restrictions on importations to England from May to September 2020, 16 March 2021", that I contributed to and

- presented to SAGE 84 can be found at this link:
<https://www.gov.uk/government/publications/cog-uk-impact-of-travel-restrictions-on-importations-to-england-from-may-to-september-2020-16-march-2021>
- b. Preliminary findings of work entitled, “Genomic epidemiology of SARS-CoV-2 in the University of Cambridge identifies dynamics of transmission: an interim report, 10 December 2020”, that I contributed to and which was tabled to SAGE but not formerly presented by me, can be found here:
<https://www.gov.uk/government/publications/genomic-epidemiology-of-sars-cov-2-in-the-university-of-cambridge-identifies-dynamics-of-transmission-an-interim-report-10-december-2020>
 - c. Details of the work presented to the SAGE-EMG in April 2021 entitled, “Genomic epidemiology of SARS-CoV-2 in the University of Cambridge identifies dynamics of transmission”, can be found here (this is an extension of the article described in 4b):
<https://assets.researchsquare.com/files/rs-520627/v1/a03ae758-e008-486d-9aa7-72b11fddeb87.pdf?c=1644320928>
<https://www.nature.com/articles/s41467-021-27942-w> (peer-reviewed publication)
 - d. I did not present or participate in the SAGE Social Care Working Group but I understand work entitled, “The role of genomics in understanding COVID-19 outbreaks in long term care facilities”, that I was involved with was presented to this sub-group in November 2020. The details of this work can be found here:
<https://osf.io/7y9rk/>
[https://www.thelancet.com/journals/lanmic/article/PIIS2666-5247\(21\)00208-1/fulltext](https://www.thelancet.com/journals/lanmic/article/PIIS2666-5247(21)00208-1/fulltext) (peer-reviewed publication)
4. 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 have not written any articles specifically regarding the work of the above-mentioned groups. I have provided short interviews related to the work I presented at SAGE 84 on assessing the efficacy of quarantine measures and related to the work I presented at the SAGE-EMG in April 2021 on the transmission of SARS-CoV-2 in the University of Cambridge. Details of these can be found here:

- a. <https://news.sky.com/story/covid-19-greece-travel-corridor-brought-in-a-large-amount-of-virus-say-experts-12250258>
- b. <https://www.cam.ac.uk/research/news/genomic-study-shows-that-englands-travel-quarantine-measures-were-effective-up-to-a-limit> (provided after acceptance of the article to a peer-reviewed journal, *Nature Communications*)
- c. <https://www.cam.ac.uk/stories/screeningprogramme>

- d. <https://www.theguardian.com/world/2021/jun/01/autumn-covid-cases-cambridge-university-nightclub>

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:

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.

Given my limited experience of attending SAGE and SAGE-EMG, I do not feel sufficiently equipped to make an informed judgement on 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.

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.

I refer to my answer to question 6 and feel due to my limited involvement with the above-mentioned groups, I do not feel equipped to provide an informed opinion of what lessons can be learned from the UK's response to the Covid-19 pandemic, in particular relating to the work of the above-mentioned groups.

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.

Beyond what has been described above, I hold a copy of the power-point presentation I delivered to SAGE 84 and to the SAGE-EMG in April 2021.