

Questionnaire

UK COVID-19 Inquiry: Module 2B - Rule 9 Request to Dr Giri Shankar-
Reference:M2B/GS/01

Please provide the following information:

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

Academic Qualifications: MBBS, MD, DNB, MPH, MFPH, FFPH

Qualification	Awarding Body	Date
Fellowship of the Faculty of Public Health (FFPH)	Faculty of Public Health, London	November 2011
Membership of the Faculty of Public Health (MFPH)	Faculty of Public Health, London	October 2008
Master of Public Health (MPH)	University of Birmingham, Birmingham, United Kingdom	September 2007
Diplomate of National Board-DNB (Social & Preventive Medicine)	National Board of Examinations, New Delhi, India	April 2006
Doctor of Medicine -MD (Community Medicine)	Kempegowda Institute of Medical Sciences (KIMS), Bangalore, India	October 2004
Bachelor of Medicine and Bachelor of Surgery -MBBS	Kempegowda Institute of Medical Sciences, Bangalore, India	April 1998

Career History

2022 – Present	Director of Health Protection, Public Health Wales
2016 – 2022	Professional Lead Consultant in Health Protection, Public Health Wales
2014 – 2016	Interim Deputy Director of Health Protection, East of England Public Health England Centre, Public Health England
2011 – 2014	Consultant in Communicable Disease Control, Norfolk, Suffolk and Cambridgeshire Health Protection Unit, Health Protection Agency
2006 – 2011	Specialist Registrar in Public Health Medicine, West Midlands Higher Specialist Training Programme, West Midlands Deanery
2004 – 2006	Assistant Professor of Community Medicine, Kempegowda Institute of Medical Sciences, Bangalore, India
2001 – 2004	Senior Resident in Community Medicine, Kempegowda Institute of Medical Sciences, Bangalore, India

Professional Experience

I have 24 years of experience of working in public health/health protection, of which the last 13 years as a consultant in communicable disease control/health protection. I have experience of working across a number of countries, settings and system in India, UK and Europe. My particular expertise is in public health protection covering the areas of communicable disease control, surveillance, field epidemiology, outbreak investigations and environmental hazards. I have been working in Public Health Wales (PHW) since September 2016.

My current role covers a number of leadership and management aspects of the health protection division, which is one of the three divisions within the Health Protection and Screening Services Directorate of PHW.

- Director of Health Protection for Public Health Wales
 - In this role I lead health protection services across Wales with a multi-disciplinary staff of more than 200. The functional areas within the division broadly include health protection acute and proactive response, communicable disease surveillance centre, vaccine preventable diseases programme, environmental health protection, communicable disease inclusion health programme and a training & guidance team.
- Incident Director for the Public Health Wales COVID response (January 2020 – September 2021)
- Co-Chair of the contact tracing group of the Welsh Government's Test, Trace and Protect programme
- Examiner, Part A, Faculty of Public Health Membership examination

Professional Affiliations and Honours

- Member of the Order of the British Empire (MBE), awarded by Her Majesty The Queen, for services to Public Health in Wales, 2021.

- General Medical Council, London Registration with Licence to Practise - No.6083619, revalidation due in February 2026
- Member- European Centre for Disease Control, EPIET Alumni Network, 2013
- Member – West Midlands Ethnic Minority Liaison Committee (WELCOM)-2006
- Karnataka Medical Council, Bangalore, India. Registration No. 53151
- Member – Rabies in India Foundation –Indian Chapter – 2006
- Member- Association for Prevention and Control of Rabies in India, 2006
- Member-Indian Public Health Association, 2002
- Member- Karnataka Association of Community Health, 2003
- Member-Indian Academy of Allergy, 2003

Publications

Research Articles

- 1) Vivancos Roberto, Anderson Charlotte, Blomquist Paula, Balasegaram Sooria, Bell Anita, Bishop Louise, Brown Colin S, Chow Yimmy, Edeghere Obaghe, Florence Isaac, Logan Sarah, Manley Petra, Crowe William, McAuley Andrew, **Shankar Ananda Giri**, Mora-Peris Borja, Paranthaman Karthik, Prochazka Mateo, Ryan Cian, Simons David, Vipond Richard, Byers Chloe, Watkins Nicholas A., UKHSA Monkeypox Incident Management team, Welfare Will, Whittaker Elizabeth, Dewsnap Claire, Wilson Allegra, Young Yvonne, Chand Meera, Riley Steven, Hopkins Susan. Community transmission of monkeypox in the United Kingdom, April to May 2022. Euro Surveill. 2022;27(22):pii=2200422. <https://doi.org/10.2807/1560-7917.ES.2022.27.22.2200422>
- 2) Thomas DRh, Fina LH, Adamson JP, Sawyer C, Jones A, Nnoaham K, Barrasa A, **Shankar AG**, Williams CJ (2022). Social, demographic and behavioural determinants of SARS-CoV-2 infection: a case-control study carried out during mass community testing of asymptomatic individuals in South Wales, December 2020. Epidemiology and Infection 150, e115, May 2022, 1–12. <https://doi.org/10.1017/S0950268822000620>
- 3) Hobson Gemma, Adamson James, Adler Hugh, Firth Richard, Gould Susan, Houlihan Catherine, Johnson Christopher, Porter David, Rampling Tommy, Ratcliffe Libuse, Russell Katherine, **Shankar Ananda Giri**, Wingfield Tom. Family cluster of three cases of monkeypox imported from Nigeria to the United Kingdom, May 2021. Euro Surveill. 2021;26(32):pii=2100745. <https://doi.org/10.2807/1560-7917.ES.2021.26.32.2100745>
- 4) Gray BJ, Craddock C, Couzens Z, Bain E, Dunseath GJ, **Shankar AG**, Luzio SD, Perrett SE. Abundance of undiagnosed cardiometabolic risk within the population of a long-stay prison in the UK. Eur J Public Health. 2020 Oct 15:ckaa187. doi: 10.1093/eurpub/ckaa187. Epub ahead of print. PMID: 33057683.

- 5) Currie J, Adamson J, Bowden B, Woolls J, Jones R, Healy B, Heyburn D, **Shankar AG**, Howe R. Impact of a novel community testing pathway for people with suspected COVID19 in Wales: a cost-minimisation analysis. *BMJ Open*. 2020 Aug 16; 10(8):e038017. doi: 10.1136/bmjopen-2020-038017. PMID: 32801205; PMCID: PMC7430413.
- 6) Perrett SE, Plimmer A, **Shankar AG**, Craine N. Prevalence of HCV in prisons in Wales, UK and the impact of moving to opt-out HCV testing. *J Public Health (Oxf)*. 2020 May 26;42(2):423- 428. doi: 10.1093/PublicMed/fdaa022. PMID: 32090269.
- 7) Perrett SE, Cottrell S, **Shankar AG**. Hepatitis B vaccine coverage in short and long stay prisons in Wales, UK 2013-2017 and the impact of the global vaccine shortage. *Vaccine*. 2019 Aug 14;37(35):4872-4876. doi: 10.1016/j.vaccine.2019.02.065. PMID: 31362822.
- 8) Gray BJ, Perrett SE, Gudgeon B, **Shankar AG**. Investigating the prevalence of latent Tuberculosis infection in a UK remand prison. *J Public Health (Oxf)*. 2020 Feb 28;42(1):e12- e17. doi: 10.1093/pubmed/fdy219. PMID: 30608602
- 9) Fina L, Phillips AL, Jones AT, Couzens ZM, Drayton R, Thomas DRh, **Shankar AG**. Early Experience of Implementing a National HIV Pre-Exposure Prophylaxis Service in Wales, United Kingdom, 2017. + Author Affiliations *Sexual Health* 16(1) 56-62 <https://doi.org/10.1071/SH18091>
- 10) Cottrell S, Moore C, Perry M, Hilvers E, Williams C, **Shankar AG**. Prospective enterovirus D68 (EV-D68) surveillance from September 2015 to November 2018 indicates a current wave of activity in Wales. *Euro Surveill*. 2018;23(46):pii=1800578. <https://doi.org/10.2807/1560-7917.ES.2018.23.46.1800578>
- 11) Currie Jonny, Davies Llion, McCarthy Joanne, Perry Malorie, Moore Catherine, Cottrell Simon, Bowley Mererid, Williams Chris, **Shankar Ananda Giri**, Stiff Rhianwen. Measles outbreak linked to European B3 outbreaks, Wales, United Kingdom, 2017. *Euro Surveill*. 2017;22(42):pii=17-00673.<https://doi.org/10.2807/1560-7917.ES.2017.22.42.17-00673>
- 12) L. Davies, R. Stiff, E. Davies, **A.G. Shankar**, S. Jenkins, B.W. Mason. A patient notification exercise for Mycobacterium chimaera infection associated with cardiac bypass surgery: the Welsh perspective. *Public Health* 153 (2017) 61-63
- 13) Vaz J, Flyod C, Mason B, **Shankar AG** and Lewis H. Control of a community outbreak of hepatitis A in an area of low endemicity, Wales, 2016. Accepted for publication in *Human Vaccines & Immunotherapeutics* 2017 Volume 13 Issue 10
- 14) **Shankar AG**, Mandal S and Ijaz S. An outbreak of hepatitis B in men who have sex with men but identify as heterosexual. *Sex Transm Infect* 2016. Doi:10.1136/sextrans-2015-052490
- 15) Inns T, Trindall A, Dunling-Hall S and **Shankar AG**. Introduction of a new rotavirus vaccine: Initial results of uptake and impact on laboratory confirmed cases in Anglia and Essex, United Kingdom July 2015. *Human Vaccines & Immunotherapeutics* 2016. <http://www.tandfonline.com/doi/full/10.1080/21645515.2015.1108501>

- 16) Keeble S, Quested J, Barker D, Varadarajan A and **Shankar AG**. Immunisation of babies born to HBsAg positive mothers: An audit on the delivery and completeness of follow up in Norfolk and Suffolk, United Kingdom. *Human Vaccines & Immunotherapeutics* 2015 11:5, 1153-1156. <http://dx.doi.org/10.1080/21645515.2015.1019977>

- 17) Simms I, Wallace L, Thomas DR, Emmett L, **Shankar AG**, Vinson M, Padfield S, Andrady U, Whiteside C, Williams CJ, Midgley C, Johnman C, McLellan A, Currie A, Logan J, Leslie G, Licence K, Hughes G. Recent outbreaks of infectious syphilis, United Kingdom, January 2012 to April 2014. *Euro Surveill.* 2014; 19(24):pii=20833. Available online: <http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=20833> (IF=4.59)

- 18) Inns T, Beasley G, Lane C, Hopps V, Peters T, Pathak K, Perez-Moreno R, Adak GK, **Shankar AG**, on behalf of the Outbreak Control Team. Outbreak of Salmonella enterica Goldcoast infection associated with whelk consumption, England, June to October 2013. *Euro Surveill.* 2013; 18(49):pii=20654. Available online: <http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=20654> (IF=4.59)

- 19) Young N, Pebody R, Smith G, Olowokure B, **Shankar G**, Hoschler K et al. (2014) International flight-related transmission of pandemic influenza A (H1N1)pdm09: an historical cohort study of the first identified cases in the United Kingdom. *Influenza and Other Respiratory Viruses* 8(1), 66–73. (IF=1.895)

- 20) **Shankar AG**, Janmohamed K, Olowokure B, Smith GE, Hogan AH, De Souza V, et al. Contact tracing for influenza A(H1N1)pdm09 virus–infected passenger on international flight. *Emerg Infect Dis* [Internet]. 2014 Jan. <http://dx.doi.org/10.3201/eid2001>. (IF=7.3)

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- 22) Aasheim ET, Seymour M, Balogun K, Ngui SL, Williams CJ & **Shankar AG**. Acute hepatitis A in an elderly patient after care worker travel to high endemicity country. *Human Vaccines & Immunotherapeutics* 9:11, 2480 - 2482; PMID: 23880980; <http://dx.doi.org/10.4161/hv.25719> (IF=3.58)

- 23) **Shankar AG**, Lee A, Reddy H and Seymour M. Bordetella pertussis infection in a child with completed primary immunization: A case report. *Human Vaccines & Immunotherapeutics* 9:2, 291-293; February 2013 (IF=3.58)

- 24) Elumogo TN, Booth D, Enoch DA, Kuppuswamy A, Tremlett C, Williams CJ, **Shankar AG**, Morter S. Bordetella pertussis in a Neonatal Intensive Care Unit: identification of the mother as the likely source. *Journal of Hospital Infection* October 2012 Vol. 82, Issue 2, Pages 133-135 (IF=2.782)

- 25) **Shankar AG**. Role of Syndromic Surveillance in Emergency Preparedness and Response. *Journal of Indian Medical Association*. February 2011.

- 26) **Shankar AG** et al. Tuberculosis and Deprivation. Chapter in West Midlands Key Health Data set. University of Birmingham 2009.
- 27) **Shankar AG**, Samraj R, Aiyedun V, Janda M & Ramaiah S. General practitioners' perceptions on pneumococcal vaccination for children in United Kingdom. *Human Vaccines* 5:3, 1-4; March 2009
- 28) Sahota N, Hood A, **Shankar AG**, Watt B and Ramaiah S. Developing performance indicators for primary care: Walsall's experience. *British Journal of General Practice* 2008; 58: 856–861. (IF=2.03)
- 29) **Shankar AG**, Abdul F, Sahota N and Ramaiah S. Delivering Public Health in Primary Care: Role of General Practitioners with Special Interest in Public Health. *Clinical Focus -Primary Care* 3;1, 4-6, June 2007
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- 33) Sudarshan MK, Mahendra BJ, AshwathNarayana DH, Sanjay TV, **Shankar AG** and Venkatesh GM. Evaluation of safety and efficacy of a new indigenous equine rabies immunoglobulin. *Journal of APCRI*, Vol VIII Issue 1; 15-19; July 2006.
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- 36) Sudarshan MK, Madhusudana SN, Mahendra BJ, AshwathNarayana DH, **Shankar AG**, Popova O and Vakil HB. Evaluation of a New Five-Injection, Two-Site, Intradermal schedule for Purified Chick Embryo Cell Rabies Vaccine (PCECV): A Randomized, Open-Label, Active-Controlled Trial in Healthy Adult Volunteers in India. *Current Therapeutic Research*, New Jersey, USA, Volume 66; Number 4; 323-334; July / August 2005.

Letters

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- 39) **Shankar AG** and Ramaiah S. BMJ should encourage publications from developing countries. <http://www.bmj.com/cgi/eletters/334/7583/4-a#153460>
- 40) **Shankar AG** and Sudarshan MK. Female literacy: An important determinant of women's health. *Journal of Epidemiology and Community health*. December 2006. (available at http://jech.bmj.com/cgi/eletters?lookup=by_date&days=30#1273)
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- 42) **Shankar AG** and Chandra P. Detecting Fabricated or induced illness in Children: Are we ready for covert video surveillance? *BMJ* vol 331; Nov 2005 pg 1144
- 43) **Shankar AG** et al. General Practitioners with Special Interest in Public Health: Walsall's success story. *Journal of Epidemiology and Community Health*. vol 59; Nov 2005
- 44) **Shankar AG** and Ramaiah S. Cost-Effectiveness of complementary and Alternative Medicine: Not to be seen in isolation. <http://bmj.bmjournals.com/cgi/content/full/331/7525/1144>

Books/Manual

- 45) Sudarshan MK, Mahendra BJ, AshwathNarayana DH, **Shankar AG**. A Guide to Intradermal Rabies Vaccination. Published by Rabies Epidemiology Unit and Anti-Rabies Clinic, Department of Community Medicine, Kempegowda Institute of Medical Sciences, Bangalore, INDIA, 2006. Available at <http://www.kimscommunitymedicine.org/files/idrv.pdf>

2. A list of the groups (i.e. TAG and/or any of its subgroups) in which you have been a participant, and the relevant time periods. Please also confirm if you are or have been a participant in SAGE or other relevant groups.

I was a member of the Welsh Government Technical Advisory Group (TAG) from March 2020 and continue as a member to present.

I was an "observer" in SAGE from March 2021 until February 2022.

I was the Co-Chair, Contact Tracing group – design systems for contact tracing, implementation support and co-ordination of technical response

3. An overview of your involvement with those groups between January 2020 and May 2022, including:

a. When and how you came to be a participant;

I was invited by Dr Rob Orford, Chief Scientific Advisor (Health), Welsh Government, to join the first meeting of TAG in March 2020.

I was invited by the SAGE Secretariat to join SAGE, as an observer, in March 2021

I was asked by Chief Executive Officer of PHW, to co-chair the contact tracing group in the summer of 2020

b. The number of meetings you attended, and your contributions to those meetings; and

The frequency of TAG meetings varied during the pandemic from 3 times a week to twice a week to weekly or less frequently. There were 149 meetings up to the end of May 2022. I attended approximately 90% of meetings, and was an active contributor, particularly in discussions about surveillance, contact tracing and outbreaks.

SAGE meetings were regularly held. I started to join SAGE, as an observer from meeting number 83 (11 March 2021) to meeting number 105 (10 February 2022). I attended approximately 90-95% of the meetings between those dates.

The contact tracing operational leads group met regularly once a week and at certain times of need it met more than once per week for a limited period. I co-chaired this group and provided technical subject matter expertise on aspects of contact tracing as well as coordinated the support from PHW to the contact tracing (the Trace) element of Test, Trace and Protect programme

c. Your role in providing research, information and advice.

In TAG, I was particularly involved in providing epidemiological and outbreak summary from Public Health Wales's perspective.

In SAGE my role was an observer, and therefore did not involve providing any research, information and advice.

In the contact tracing leads group, I provided epidemiological summary reports and any technical support needed on aspects of contact tracing.

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

I have provided epidemiological summary reports to TAG on a number of occasions. These have been used, along with other contributions from relevant TAG members, and has culminated in TAG outputs. All TAG outputs, which are publicly available can be found in this link – <https://www.gov.wales/node/30180/latest-external-org-content?page=0>

I have not provided any papers to SAGE. All SAGE related outputs, including meeting notes are publicly available at this link - <https://www.gov.uk/government/collections/scientific-evidence-supporting-the-government-response-to-coronavirus-covid-19#meeting-minutes-and-supporting-papers>

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 Welsh Government's response to the Covid-19 pandemic. Please include links to those documents where publicly available.

I have not written any articles for TAG, but have provided comments on drafts, where such comments were sought. I have not written any articles for SAGE.

I have not provided any interviews regarding the work of TAG or SAGE. However, in my role as Incident Director for PHW, I have used or quoted the work of TAG and SAGE during interviews that I have given.

6. Your views as to whether the work of the above-mentioned groups in responding to the Covid-19 pandemic (or Wales'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;**

My view is that TAG started with a relatively small but specific set of experts but rapidly expanded to a broad range of experts from health, social care, academia and government.

SAGE also had a broad range of experts across various domains of its remit.

The contact tracing leads group, in my view, largely worked well. There was some challenges in terms of certain short-notice changes that had to be implemented and the frontline teams in the Health Boards and Local Authorities found it difficult in terms of the pace.

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

TAG and its sub-group commissioned work through its members. From my perspective, surveillance and epidemiological report featured as a regular standing item of the agenda. The routine outputs and ad hoc reports that PHW produced were used to provide an update to TAG.

SAGE had a clear mechanism to commission work with questions that needed answering by a certain deadline. The SAGE papers were often received a short time before the start of the meeting, which made it challenging to read them all thoroughly.

The contact tracing leads group was largely run by the secretariat from Welsh Government and actions and action owners were clearly captured in the notes. Depending on the matter of discussion the relevant teams were allocated the tasks.

c. The resources and support that were available;

The TAG was supported by a scientific advisor (chair) and a deputy (vice-chair) plus secretariat from Welsh Government. All members contributed as relevant to their areas of expertise.

SAGE had a chair and vice-chair and well-functioning secretariat.

The contact tracing leads group was well supported. However, for the contact tracing function itself there was regular discussions around the financial resources required.

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

I think that TAG strived hard to provide the best possible advice within the limitations of uncertainty and rapidly changing situations and in my view, as relevant to my area of expertise, was largely appropriate. The chair of TAG made it clear, regularly and repeatedly, that the purpose of TAG is to advise and not to make policy decisions (which is the remit of the officials/ministers).

SAGE outputs were, in my view, extremely relevant and has been used extensively in advising government officials and ministers

The outputs of the contact tracing leads group were, in my view, extremely relevant and has helped roll-out and sustain an good model for Wales.

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

TAG and its sub-groups worked effectively.

Similarly, SAGE and its sub-groups worked effectively.

The contact tracing leads group worked as best as it possible could with other groups.

There were times when it was felt that there were large number of (other) groups that potential for duplication and confusion.

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

In my view, to a large extent, the advice provided at TAG and SAGE were taken onboard by those who had a role in using that advice to make policy decisions.

In my view, to a large extent, the work of the contact tracing leads group was effective in delivering a good “trace” function for Wales.

7. Your views as to any lessons that can be learned from the Welsh Government'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.

During the entire period, things were rapidly evolving. Decisions had to be made at pace, particularly in the period before the roll-out of vaccinations. During this period, the focus, rightly, was at preventing deaths and serious harm from COVID. This led to the decisions that were made. As far as practically possible, the wider (unintended) impacts of COVID control on other aspects of society were taken into account, but it was not always possible to strike a good balance between the two. However, after the introduction and roll-out of vaccines, things were better in terms of being able to get a better balance between not having too many restrictions and yet at the same time keeping the adverse impacts of COVID under manageable levels.

In terms of lessons, I feel, that a number of surveillance reports/outputs were produced at pace, based on the situation at the time. However, when the situation changed and the reports, (including their frequency) needed to be reviewed, the pace at which that happened was slow. This meant that new reports were being added but there was hesitancy to stop/withdraw old reports.

There was a blur between provision of PHW's scientific advice to TAG and to Welsh Government. Often, we had to provide our view at TAG and then additionally, through advice notes to the Chief Medical Officer for Wales.

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.

I have been made aware by the TAG secretariat that all TAG related meeting papers and minutes can be made available to all members.

PHW holds the collection of all surveillance and epidemiological reports produced during the pandemic that was used to provide update to TAG.

I have access to my personal notes for SAGE meetings that I have attended. The full minutes are available publicly.