

UK COVID-19 Inquiry: Module 2 - Rule 9 Request to Dr Venki Ramakrishnan - Reference:
M2/SAGE/01/VR

Please provide the following information:

1. A brief overview of your qualifications, career history, professional expertise and major publications.
I am a group leader at the MRC Laboratory of Molecular Biology, where I study the structural basis of translation and its regulation. Details of my career history can be found on my web page (<https://www2.mrc-lmb.cam.ac.uk/groups/ribo/lab-members/>), where a copy of my CV can also be found. I was president of the Royal Society from 30/11/2015-30/11/2020.
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 participated in SAGE meetings (but not any of its subgroups) in the summer of 2020.
I also took part remotely in a “red-teaming” effort organized by No. 10 on 12 August 2020 at which the PM, the GCSA and CMO were all present.
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;
At the time I was the President of the Royal Society. We decided to convene a working group which we called DELVE, which initially had the idea of using data analysis to identify successful response to the pandemic. However, the group consisted of computer and data scientists, clinicians and experts in infectious disease, immunologists, as well as economists including behavioral economists. Thus our interest became widespread. Details of the working group, its composition and work can be found here: <https://rs-delve.github.io/about.html>
 - b. The number of meetings you attended, and your contributions to those meetings;
The meetings I attended were from April – September 2020: SAGE meetings 25-30, 33-43, 45-49, 51, 53-57, and 61.
In addition, I was present remotely at a “red-teaming” effort held by No. 10 with the Prime Minister on 12 August 2020, mainly to assess the risks of the autumn and winter, and prospects for treatment including vaccines.
 - c. Your role in providing research, information and advice.
I was present as an ex-officio chair of DELVE and these were not my personal contributions. Rather, it was my role to communicate the consensus view of our working group as well as to inform the group of ongoing needs and concerns of the government and its scientists to guide its future work.
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.
The following documents were submitted on behalf of DELVE:
 - a. Report on face masks for the general public, 21 April 2020:
<https://www.gov.uk/government/publications/delve-report-on-face-masks-for-the-general-public-21-april-2020>
 - b. Report on test, trace, isolate and support, 18 May 2020:
<https://www.gov.uk/government/publications/delve-report-on-test-trace-isolate-and-support-18-may-2020>

- c. Estimates concerning nosocomial COVID-19 infections in England for the period between 26 April and 7 June, submitted 30 June 2020:
<https://www.gov.uk/government/publications/delve-technical-document-1-estimates-concerning-nosocomial-covid-19-infections-in-england-for-the-period-between-26-april-and-7-june-30-june-2020>

In addition, DELVE produced a number of documents, which ranged from effect on schools and on the economy, all of which can be found here: <https://rs-delve.github.io/reports.html>
Some of these, eg the report on education, was cited in the SPI-B and DfE report on the benefits of remaining in education: <https://www.gov.uk/government/publications/spi-bdfe-covid-19-benefits-of-remaining-in-education-evidence-and-considerations-4-november-2020/spi-b-and-dfe-covid-19-benefits-of-remaining-in-education-evidence-and-considerations-4-november-2020>

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.

Interviews:

24 May 2020

- **Andrew Marr Show** (in connection with face masks, science advice to government and Dominic Cummings escapade in Durham): <https://www.bbc.co.uk/programmes/p08f295v>

7 July 2020 (in connection with report on face masks):

- **BBC Breakfast – Clip** - <http://my.tvey.es/e7WBm> (Available for 30 days)
 - Breakfast interview clips carried in subsequent bulletins throughout the day, for example: **BBC News clip** - <http://my.tvey.es/Rs75J>
- **BBC R4 Today programme - Venki interview**
(From 1.41.50 - <https://www.bbc.co.uk/sounds/play/m000kp4w>)
Transcript at the end of this email
- **Sky News with Mark Austin – 1800**

Articles:

18 May 2020

Blog on “following the science”: <https://royalsociety.org/blog/2020/05/following-the-science/>

24 May 2020

Article on “following the science” in The Guardian:

<https://www.theguardian.com/world/2020/may/24/everyone-wants-to-follow-the-science-but-we-cant-waste-time-on-blame>

07 July 2020

Royal Society press release on face masks: <https://royalsociety.org/news/2020/07/president-of-the-royal-society-urges-everyone-to-wear-a-face-covering/>

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;

The group had a good mixture of expertise, including epidemiologists as well as representatives of health-care organizations. However, many aspects tended to be dominated by groups from Imperial College and the London School of Hygiene & Tropical Medicine. There could have been more specialists in virology and respiratory infectious diseases. By contrast, the presence of CSAs from various government departments, many of whom had little or no expertise in epidemiology, infectious disease, virology, molecular biology or public health, was not helpful and occasionally counterproductive. It was also fortunate that in this particular crisis the GCSA, Patrick Vallance, was a medically trained life scientist with pharmaceutical industry experience and could work very closely and on equal terms with the CMO.

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

I do not have enough information to comment

c. The resources and support that were available;

I do not have enough information to comment

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

The advice represented a consensus view and was not always unanimous. Advice would also change as more data emerged. How to express the range of views and overall transparency could be something for the inquiry to consider.

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

I do not have enough information to comment.

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

I believe government could be more proactive about emphasizing the need for action despite any uncertainties; also once policies are adopted, the messaging around them needs to be consistent and clear, whether this had to do with social distancing, isolation, reporting of symptoms, use of face masks, etc. As an example for some time there was highly inconsistent policy on the use of face masks, eg initially they were not recommended, then they were required in some scenarios like public transport but not in shops. The public was aware that this made no sense, and it reduced confidence in the government's policy and compliance as a result.

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.

Despite the fact a pandemic was considered the most important risk in the risk register, I feel the UK was ill prepared for it. It did not have sufficient PPE to begin with because stocks of PPE were allowed to expire, and hospitals were under great stress for a variety of reasons. Nosocomial infections resulted in a number of deaths in care homes. Much of the initial work was based on flu, and some of the initial advice was not really optimal for covid. For example the relative importance hand washing, social distancing and face masks was initially emphasized in exactly the reverse order, considering we now know that covid is spread primarily by inhaling airborne droplets, and continued to be so emphasized even after it should have been corrected. Some of it has to do with cultural norms. We are used to thinking of washing hands as good

hygiene, which in general is correct; but we as a society seem much more averse to face masks than Asian countries that have lived through SARS and other respiratory epidemics, but as we discovered, public norms can be changed by clear messaging and setting examples at the top.

I think failure to invest in crisis preparedness is a false economy. Just as we insure our own homes against fire and flood, the government needs to invest significant sums on crisis preparedness and have working groups that meet regularly to update their conclusions and advice and check preparedness. In the first stage of the pandemic, which was essentially a holding period until vaccines or medicines were developed, Asian countries and Australia and New Zealand did far better than the UK, although to be fair, the UK is in about the middle of the table of European countries in terms of per capita deaths. This period did not require advanced science and technology. Countries much less scientifically advanced than the UK fared better during this period as a result of clear policy decisions, messaging and enforcement by their governments. Prior experience, eg with the SARS epidemic, may well have prepared many of these countries better for the COVID-19 pandemic.

On the other hand, when it came to hard-core understanding of the molecular biology and immunology of viruses, development of vaccines, etc. the UK's strengths as an advanced scientific country showed. The government and its scientists excelled when it came to rolling out the vaccine, one of which was developed in the UK. The UK also did particularly well in carrying out randomized trials of various pharmaceutical interventions, ruling out ones that were not efficacious as well as showing others that were. Sequencing of COVID strains as they emerged and keeping track of the emergence of variants and their properties was an area in which the UK was a clear world leader.

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.
All material I hold has been mentioned in this response and provided as links. I do not have other material.