Disease transmission and control modelling at the science-policy interface Appendix

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Appendix 1: Survey Participant Information Sheet

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Transmission modelling at the science-policy interface

CUREC Approval Reference: R74566/RE001

General Information

The aim of this study is to support us in writing an article for a special edition of the *Journal of the Royal Society Interface Focus* themed on COVID-19 in society. We are looking at this through the lens of mathematical modelling. As well as reviewing some of the key literature, we want to further understand the relationship between modelling and policymaking as well as how this is reported in the media. As the pandemic continues, understanding these relationships and how they can be improved is critical. Moreover, this research will provide historical context of COVID-19 modelling and how this has shaped the UK response in the coming years.

We appreciate your interest in participating in this online survey. You have been invited to participate as you are publicly listed as being a member of or having attended a meeting of SAGE, SPI-M or other comparable advisory body.

You may ask any questions by contacting the researcher (details below).

The Principal Researcher is Ruth McCabe, who is attached to the Department of Statistics at the University of Oxford. This project is being completed under the supervision of Professor Christl Donnelly.

The link above provides access to the survey. This includes 8 multiple choice, with option to expand answers, and 2 open-ended questions. The final questions ask for explicit consent from you under a chosen level of anonymity. There is an option to enter a name and job title, but if this information is not provided there is no way in which you can be identified. This should take about 10 minutes to complete.

The data gathered will be used to form the discussion within the article. Answers to multiple-choice questions remain anonymous while answers to open-ended questions may be quoted within the article under the chosen level of anonymity. Only the Principal Researcher and Supervisor will have access to the raw data, although summaries and, conditional on consent, some individual quotes will be used in the article and the corresponding DPhil thesis chapter.

Do I have to take part?

No. Please note that participation is voluntary. If you do decide to take part, you may withdraw at any point, for any reason, before submitting your answers by closing the browser.

If you have already taken part, but now wish to withdraw, please let us know by emailing us. However, if you have not provided a name or job title we will be unable to identify your response.

How will my data be used?

The data we will collect that could identify you will be your name and job title, but only if you voluntarily enter this information.

Identifiable information will be deleted as soon as it is no longer required for the research. This is expected to be in approximately 4.5 years' time to allow for completion of the DPhil thesis. Research data (including consent records) will be stored for three years after publication or public release.

Your IP address will not be stored. We will take all reasonable measures to ensure that data remain confidential.

The responses you provide will be used in an academic publication under the specified level of anonymity determined in the final questions of the survey. If you explicitly provide consent to use your name and job title, or just job title, then this will be written in the article next to the quote provided in the survey, if it is chosen for inclusion, and thus may be attributable to you. Otherwise, any quotes you provide (and we use) will be entirely unattributable to you.

Who will have access to my data?

The University of Oxford is the data controller with respect to your personal data, and as such will determine how your personal data is used in the study. The University will process your personal data for the purpose of the research outlined above. Research is a task that we perform in the public interest. Further information about your rights with respect to your personal data is available from https://compliance.admin.ox.ac.uk/individual-rights.

The data you provide will not be shared with any other party other than the principal researcher and their supervisor.

This survey will be written up for a DPhil degree.

Who has reviewed this study?

This project has been reviewed by, and received ethics clearance through, the University of Oxford Central University Research Ethics Committee R74566/RE001.

Who do I contact if I have a concern or I wish to complain?

If you have a concern about any aspect of this study, please contact Ruth McCabe at ruth.mccabe@linacre.ox.ac.uk or her supervisor Professor Christl Donnelly at christl.donnelly@stats.ox.ac.uk, and we will do our best to answer your query. We will acknowledge your concern within 10 working days and give you an indication of how it will be dealt with. If you remain unhappy or wish to make a formal complaint, please contact the Chair of the Medical Sciences Interdivisional Research Ethics Committee at the University of Oxford who will seek to resolve the matter as soon as possible:

Email: ethics@medsci.ox.ac.uk; Address: Research Services, University of Oxford, Wellington Square, Oxford OX1 2JD

If you have read the information above, have already taken part and are still happy for your data to be used as described above, then no further action is needed. We thank you for your participation.

If you have read the information above, have already taken part and now wish to withdraw from the study then please contact Professor Christl Donnelly (christl.donnelly@stats.ox.ac.uk).

If you have read the information above, agree to participate with the understanding that the data (including any personal data) you submit will be processed accordingly and have not already taken part, you can take part now by clicking this link.

Appendix 2: Questions in survey to attendees of SAGE, SPI-M and other comparable advisory committees

Appendix Table 1 presents the survey questions sent asked of attendees of SAGE, SPI-M and other comparable advisory committees alongside number of respondents per option.

Appendix Table 1: Questions, and multiple-choice answers where relevant, for the survey sent to attendees of SAGE, SPI-M and other comparable advisory committees.

Question		Question type	Responses (if MC)	Number of respondents (n (%))
Questions on modelling				
1	Have you ever attended any SAGE, SPI-M or similar (for example, Scottish Government COVID-19 Advisory Group) meeting related to COVID-19?	Multiple-choice	Yes	46 (100%)
			No	0
2	Did discussions with decision-makers inform the scenarios that were modelled?	Multiple-choice	Yes	24 (52%)
			No	3 (7%)
			Sometimes	14 (30%)
			Other	5 (11%)
			[Not answered]	0
3	[Optional] Please provide any further comments you feel are relevant to Question 2.	Open-ended		33 (72%)
4	Did the presented modelling influence the scientific understanding of decision-makers?	Multiple-choice	Yes	30 (65%)
			No	0
			Sometimes	8 (17%)
			Other	7 (15%)
			[Not answered]	1 (2%)
5	[Optional] Please provide any further comments you feel are relevant to Question 4.	Open-ended		26 (56%)
6	Did the presented modelling influence the decision-making?	Multiple-choice	Yes	30 (65%)
			No	0
			Sometimes	8 (17%)
			Other	7 (15%)
			[Not answered]	1 (2%)

Question		Question type	Responses (if MC)	Number of respondents (n (%))
7	[Optional] Please provide any further comments you feel are relevant to Question 6.	Open-ended		24 (52%)
8	To what extent were you involved in any policy decisions made?	Multiple-choice	Highly influential involvement	7 (15%)
			Moderately influential involvement	12 (26%)
			Minimal involvement	19 (41%)
			Other	7 (15%)
			[Not answered]	1 (2%)
9	[Optional] Please provide any further comments you feel are relevant to Question 8.	Open-ended		25 (54%)
10	Did the presented modelling generally make similar assumptions underlying transmission dynamics?	Multiple-choice	Yes	20 (43%)
			No	4 (9%)
			Sometimes	17 (37%)
			Other	4 (9%)
			[Not answered]	1 (2%)
11	[Optional] Please provide any further comments you feel are relevant to Question 10.	Open-ended		25 (54%)
12	Did the presented modelling generally draw similar conclusions about the appropriate next steps?	Multiple-choice	Yes	22 (48%)
			No	1 (2%)
			Sometimes	19 (41%)
			Other	2 (4%)
			[Not answered]	2 (4%)
13	[Optional] Please provide any further comments you feel are relevant to Question 12.	Open-ended		21 (46%)
14	How broad was the range of modelling scenarios that was considered?	Multiple-choice	Very broad	8 (17%)
			Reasonably broad	31 (67%)
			Not very broad	2 (4%)
			Other	4 (9%)
			[Not answered]	1 (2%)

Question		Question type	Responses (if MC)	Number of respondents (n (%))
15	[Optional] Please provide any further comments you feel are relevant to Question 14.	Open-ended		18 (39%)
16	Based on your experience of COVID-19, how could communication between policymakers and modellers be improved when responding to a future health emergency?	Open-ended		38 (83%)
17	Please provide any further comments about your experiences of COVID-19 modelling and/or policymaking here.	Open-ended		27 (59%)
Personal Information				
18	Please select one of the following options.	Multiple-choice	I give permission for written answers in this form to be used as quotes in the article which will be attributed to me using my full name and job title as stated below.	
			I give permission for written answers in this form to be used as quotes in the article but without my full name. Instead, I can be referred to anonymously using only the description of my job title below.	
			I give permission for written answers in this form to be used as quotes in the article only under complete anonymity.	
19	[Optional] Name	Open-ended		
20	[Optional] Job title and institution	Open-ended		

Appendix 3: Interview Participant Information Sheet

Department of Statistics
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Oxford
OX1 3LB

Professor Christl Donnelly
University Direct Line: 01865 ******
University e-mail: christl.donnelly@stats.ox.ac.uk

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General Information

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You are invited to participate due to your expertise in the interface between science, policy and media.

You may ask any questions by contacting the researcher (details below).

The Principal Researcher is Ruth McCabe, who is attached to the Department of Statistics at the University of Oxford. This project is being completed under the supervision of Professor Christl Donnelly.

The interview would take place virtually, on a platform of your choice. You would be asked broad questions about the relationships between modelling, decision-making, the media and the public but would be strongly encouraged to shape the conversation in the way that you feel most comfortable with. You would be asked for permission for the meeting to be recorded. The interview would be scheduled to take approximately half an hour.

The data gathered is being used to form the discussion within the article. Only the Principal Researcher and Supervisor would have access to the raw data, although summaries and, conditional on consent, some individual quotes will be used in the article and the corresponding DPhil thesis chapter.

Do I have to take part?

No. Please note that participation is voluntary. If you have taken part, you may withdraw at any point, for any reason by contacting Professor Christl Donnelly.

How will my data be used?

The recording of the interview would be transcribed and the original recording deleted.

Transcripts and identifiable information would be deleted as soon as it is no longer required for the research. This is expected to be in approximately 4.5 years' time to allow for conferment of the DPhil thesis. Research data (including consent records) will be stored for three years after publication or public release.

We will take all reasonable measures to ensure that data remain confidential.

The responses you provided will be used in an academic publication under the specified level of anonymity determined by you. If you explicitly provide consent to use your name and job title, or just job title, then this would be written in the article next to quotes provided in the interview, if it is chosen for inclusion, and thus may be attributable to you. You would be asked to approve the use of your quotations before this identifiable information is provided.

Who will have access to my data?

The University of Oxford is the data controller with respect to your personal data, and as such will determine how your personal data is used in the study. The University will process your personal data for the purpose of the research outlined above. Research is a task that we perform in the public interest. Further information about your rights with respect to your personal data is available from https://compliance.admin.ox.ac.uk/individual-rights.

The data you provide will not be shared with any other party other than the principal researcher and their supervisor.

This interview will be written up for a DPhil degree.

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Email: ethics@medsci.ox.ac.uk; Address: Research Services, University of Oxford, Wellington Square, Oxford OX1 2JD

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Appendix 4: Interview Details

Appendix Table 2: The names of interview participants, alongside the date of interview and platform on which it was conducted.

Interview Participant	Job Description	Date	Platform
Professor Linda Bauld	Bruce and John Usher Chair of Public Health at the University of Edinburgh	10 June 2021	Zoom
Professor Sir John Beddington	Former Government Chief Scientific Adviser 2008 - 2013	17 February 2021	Zoom
Dr. Claire Craig	Former Director of Government Office for Science	15 April 2021	In person at the Queen's College, Oxford
Robert Cuffe	Head of Statistics at the British Broadcasting Corporation (BBC)	29 January 2021	Telephone
Fiona Fox	Director of the Science Media Centre	25 January 2021	Microsoft Teams
Professor Sir Charles Godfray	Director of the Oxford Martin School	24 February 2021	Microsoft Teams
Scott Heald	Head of Profession for Statistics at Public Health Scotland	10 February 2021	Microsoft Teams
Lord John Krebs	Former Chairman of the UK Food Standard Agency	28 January 2021	Telephone
Professor Jason Leitch	National Clinical Director for the Scottish government	18 May 2021	Microsoft Teams
William Pryor	Head of Policy Engagement at the University of Oxford	2 February 2021	Microsoft Teams
Dr. Sabine van Elsland	External Relationships & Communications Manager at the Medical Research Council Centre for Global Infectious Disease Analysis (MRC GIDA) at Imperial College London	21 January 2021	Microsoft Teams