Summary of Discussion: JBC Data Science Advisory Board Meeting,

15th January 2021, 13:30-14:45

[held virtually]

The minutes from the previous meeting and TOR were agreed and signed off.

JBC staff presented ongoing projects looking at analysis of prevalence and nowcasting modelling and briefed the DSAB on its priorities.

Group discussion considered technical aspects of the JBC analysis, including how the JBC was distinguishing between different kinds of modelling tasks such as nowcasting and forwards/backwards projections in time. Members discussed suitability of spatial units used for the analysis and while spatial smoothing is useful, and that the JBC should make sure that improvements made to modelling techniques are responding to the nature of the public health problem. It is important that data science work aligns with the challenges, such as understanding the relationship between spread in non-contiguous areas.

The group also discussed the importance of operationalising outputs and data quality issues, which are priorities of the JBC. It was noted by JBC staff that they are working with external data providers to try and get quality assurances, but this was not always trivial because many of the dataflows are very new. The Board also talked about the importance of the JBC standardising model quality assurance, uncertainty quantification, uncertainty analysis and uncertainty communication - something that the JBC is already working towards.

Members of the Board noted that as the vaccination programme rolls out across the country, we are likely to see major changes in test seeking behaviour and it is expected that Pillar 1 and Pillar 2 data will become less prominent. They said that the JBC's wastewater monitoring programme may be a crucial tool moving forwards for monitoring epidemics and that consideration should be taken for how this will be operationalised.

The Board recommended:

- The JBC form a dedicated team to perform data quality assurance exercises
- That the JBC implement a process for initially quarantining data as it arrives and running 'pre-flight' checks on it before it is then copied across to run on the sophisticated models.
- Investigate inter-model variability

Attendance

Professor Andrew Morris	Director, Health Data Research UK– Acting Chair
Professor Mark Parsons	Director of Research Computing, UK Research and Innovation
Dr Sylvia Richardson CBE	Director, Chair of Biostatistics, University of Cambridge
Professor Alison Heppenstall	Professor of Geo-computational and ESRC-Turing Fellow, University of Leeds

Professor Graham Medley	Professor of Infectious Disease Modelling, London School of Hygiene and Tropical Medicine
Professor Chris Holmes	Programme Director for Health and Medical Sciences, The Alan Turing Institute
Dr Zeynep Engin	Urban Dynamics Laboratory, UCL
Professor Simon Vosper	UK Meteorological Office
Dr Ben Goldacre	Director, DataLab, University of Oxford
Professor Dame Wendy Hall	Professor, Associate Vice President (International Engagement) and Executive Director (Web Science Institute), University of Southampton
Dr Ewan Birney	Deputy Director General, European Bioinformatics Institute
Dr James Hetherington	Chief Data Science Advisor, Joint Biosecurity Centre, Fellow – The Alan Turing Institute
Dr Johanna Hutchinson	Director of Data & Data Science, Joint Biosecurity Centre
Dr Anna Seale	Joint Biosecurity Centre, London School of Hygiene and Tropical Medicine (Presenter)
Tom Ward	Joint Biosecurity Centre (Presenter)
Dr Radka Jersakova	The Alan Turing Institute
Charlie Dunstan-Rice	Joint Biosecurity Centre (Secretariat)
Dr Isabel Bennett	Joint Biosecurity Centre (Secretariat)
Luke Bevan	Joint Biosecurity Centre (Secretariat)
Dr Tim Chadborn	Joint Biosecurity Centre (observer)
Michael Cole	Joint Biosecurity Centre (observer)
Alexander Johnson	Joint Biosecurity Centre (observer)
Dr Jasmina Pankovska-Griffiths	Joint Biosecurity Centre (observer)
Daniel Meeson	Joint Biosecurity Centre (observer)
Monica Doherty	Joint Biosecurity Centre (observer)