

Documenting the role of UK science in the Covid-19 pandemic: challenges and opportunities

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Symposium on Scientific Archives 28 June 2023

Cambridge University Libraries

Main University Library and 35 departmental and faculty libraries

Legal deposit library

University Library has a strong history of scientific collecting

University carried out scientific research into Covid-19





"There was great science...there was science that could have been better...and there was bad science..."

Jeremy Farrar with Anjana Ahuja, Spike: the Virus vs the People (2021)



What I will cover









Objectives

Defining the UK's scientific response to Covid-19

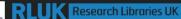
Survey findings

Challenges and opportunities

Documenting the role of UK science in the Covid-19 pandemic

Funded by the Arts and Humanities Research Council / Research Libraries UK





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Aim

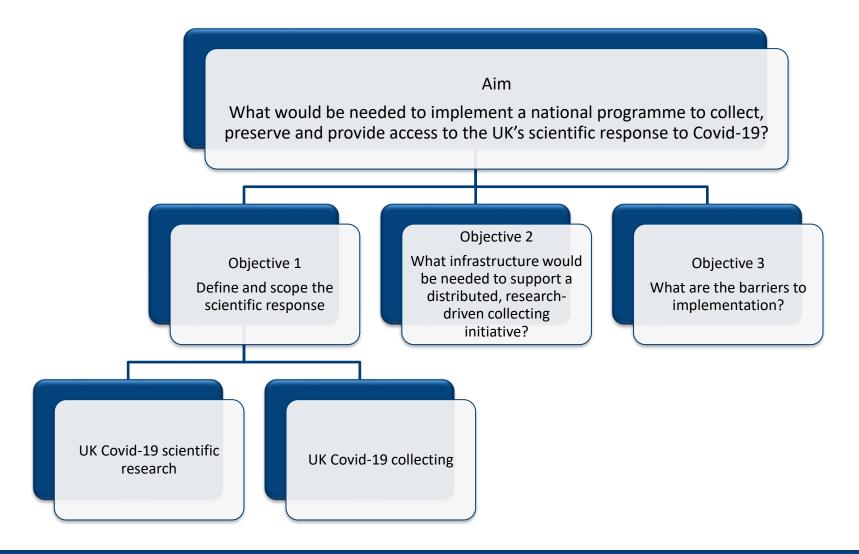
What would be needed to implement a national programme to collect, preserve and provide access to the UK's scientific response to Covid-19?



Lectern sign carrying the message 'Stay Home. Protect the NHS. Save Lives'. Object number 2021-505. © The Board of Trustees of the Science Museum. Creative Commons Attribution-Non Commercial-Share Alike 4.0 Licence

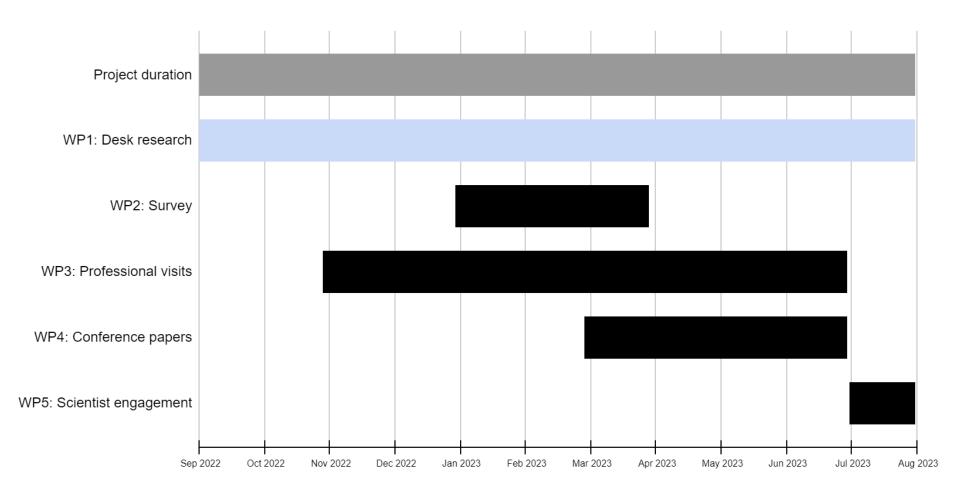


Objectives



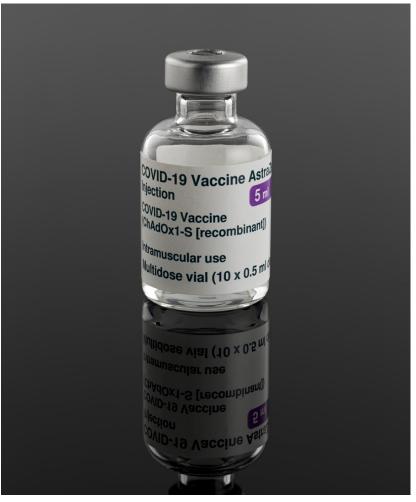


Timeline and methodology



Defining the UK's scientific response to Covid-19

Scientific endeavour in the fields of life sciences, physical sciences, applied sciences and formal sciences, involving all sections of the scientific workforce and support staff, and taking place in a range of UK settings including (but not limited to) universities, pharmaceutical companies and scientific research institutes.



Glass vial from the first doses of the Oxford-AstraZeneca COVID-19 vaccine used in the UK rollout, 4 Jan 2021. Object number 2021-431. © The Board of Trustees of the Science Museum. Creative Commons Attribution-Non Commercial-Share Alike 4.0 Licence



Excludes...



Group shot of: 2021-433, Empty vial that contained the Pfizer / Biontech vaccine against Covid-19. © The Board of Trustees of the Science Museum. Creative Commons Attribution-Non Commercial-Share Alike 4.0 Licence

Healthcare delivery

Socio-cultural record (including individual patient experience)

Social psychology

Health psychology

Public health policy

Examples of UK contributions to Covid-19 scientific research

(within broad disciplines of formal sciences, physical sciences, life sciences and applied sciences)

Testing

e.g. diagnostic testing, asymptomatic testing

Genome sequencing

e.g Covid-19 Genomics UK (COG-UK), contributions to GISAID

Therapeutic trials

e.g. RECOVERY project, HEAL-COVID project

Environmental modelling

e.g. ventilation systems, spread of Covid-19 on public transport

Immunology

e.g. vaccine development: AstraZeneca and DioSyn Vax

Biostatistics / mathematical

modelling e.g. 'R' number, death by region and age group

Engineering

e.g. Open Ventilator System Initiative (OVSI)

Cross-cutting themes

Science communication, e.g. Go Viral game, Naked Scientists, communication of risk

Human behaviour and behavioural sciences, e.g. vaccine take-up, mask wearing

Public participation, e.g. participation in vaccine trials, reporting symptoms, citizen science Public policy

Lived experience of scientists and supporting personnel, e.g. via personal testimony

Equity, Diversity and Inclusion, e.g. gender disparity in Covid-19, impact of ethnicity on case rates

Ethics, e.g. of scientific research, of collecting, embargoes, access and reuse

Out of scope

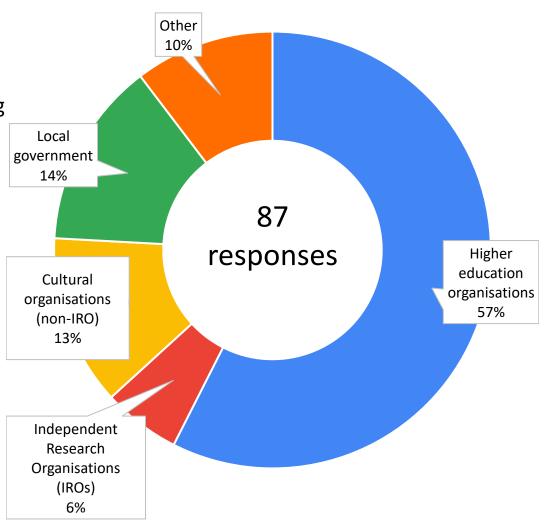
Healthcare delivery, socio-cultural record (including individual patient experience), material objects (? to be investigated)



Survey

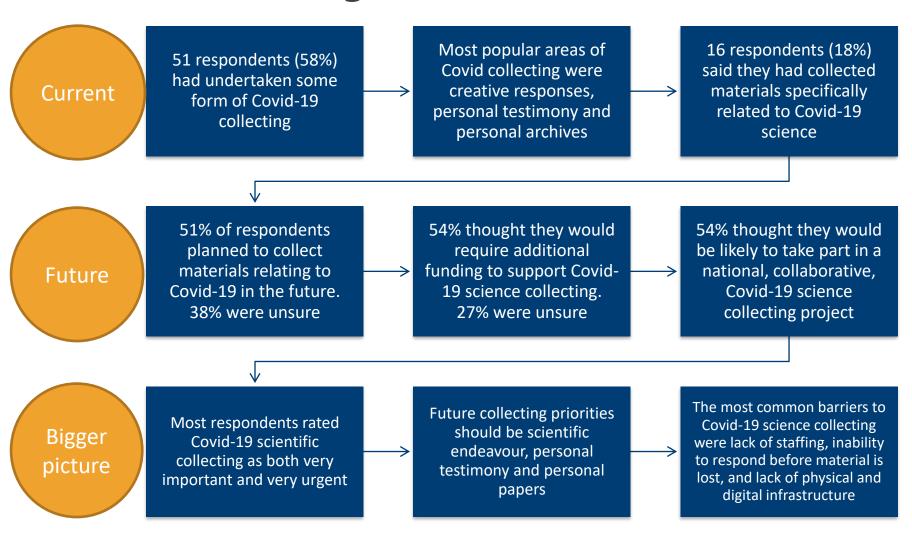
Pre-pandemic scientific collecting

- Current Covid-19 collecting
- Future Covid-19 collecting
- Covid-19 collecting priorities
- Knowledge of Covid-19 research





Headline findings





Emerging themes



Covid-19 science collecting is complex. We need to understand, and capitalise on, each other's strengths both within and across organisations, rather than expecting to be able to do everything ourselves



There is a disconnect between Covid-19 scientific research trends and the collecting that is taking place



A variety of collecting mechanisms contribute to documenting Covid-19 (e.g. special collections, modern acquisitions, repositories and legally-mandated)

Challenges

Range of formats

Complexity of subject matter and research landscape

Lack of subject expertise within collecting community

Lack of physical and digital infrastructure

Legal and regulatory obligations / constraints

Resourcing constraints

Opportunities

Rethink approaches to collecting to focus on outcomes rather than outputs

Reach broader user communities and put users at the heart of collecting

Bring together different methods of collecting and parts of the collecting sector

Make a difference to future pandemic preparedness and response



Final thought...

"Just as the records of the 1918 flu pandemic influenced contemporary pandemic planning and response, let's ensure the UK's scientific record of Covid-19 is available to be used and re-used by future generations for the benefit of society."

Charlotte Summers
Professor of Intensive Care Medicine
University of Cambridge



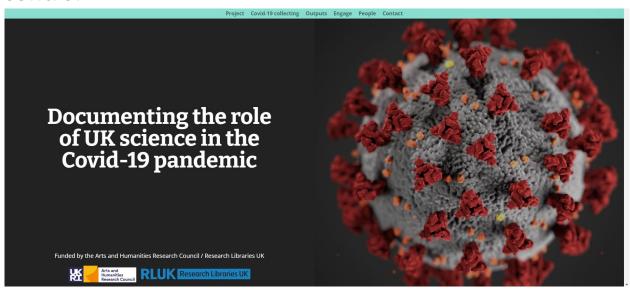
Glass model of the COVID-19 (SARS-CoV-2) virus. Object number 2021-1663. © The Board of Trustees of the Science Museum. . Creative Commons Attribution-Non Commercial-Share Alike 4.0 Licence



Thank you!

Topics:

- Engaging with different user communities (especially scientists)
- Collection-building mechanisms / pipelines
- Archiving disparate data sources and formats
- Access control



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