



# COVID-19 and robust & timely data management and data sharing

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**Global Health Research: Challenges with data management**



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# Overview

- **Data management**
- **Data sharing – global health (sharing across continents)**
  - **Example – RESPIRE**
- **COVID-19 and research, globally**
- **Example – the development of vaccines**
- **Example – ICODA**
- **Example – BREATHE**
- **Open Science?**

# Data Sharing

- **Data sharing – global health (sharing across continents)**
  - **Example – RESPIRE**
- **Challenges**
  - **Ethical – consent (has it been sought?)**
  - **Legal – can data cross international boundaries?**
  - **Scientific – is their willingness? Can you assuage doubts?**
  - **Technical issues ... where is the data?**
- **Resources?**

# COVID-19

- So, already challenging ... and then along came COVID-19
- Global problem ... global health ...
- Frantic search for treatments, and then vaccines ...
  - Repurposing every drug under the sun (including bleach?)
- Much of it observational ... problem of reproducibility
- Data sharing?
  - Press release of findings before peer-review?
  - Delay in US as FDA have to re-analyse submissions?
- <https://blogs.bmj.com/bmj/2020/11/27/covid-19-vaccines-where-are-the-data/>

- Nov 27, 2020, BMJ
  - COVID-19 vaccines – where are the data?
- How have the data been analysed? Peer review?
- What was the population? Doses? Dose intervals? Subgroups?
- <https://blogs.bmj.com/bmj/2020/11/27/covid-19-vaccines-where-are-the-data/>

# ICODA – International COVID-19 Data Alliance

<https://icoda-research.org/>



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Mastercard



**Microsoft**

AI for Health

# ICODA – Workbench

[The International COVID-19 Data Alliance \(ICODA\)](#) exists to enable and accelerate responsible research. At its heart is the “**Workbench**” – a new data platform provided by Aridhia that allows researchers to discover, access and analyse global multi-dimensional datasets while respecting confidentiality and privacy. The Workbench brings together a combination of tools and processes and can connect to regional or national data infrastructures used by ICODEA members.

Access to the Workbench is provided free of charge once researchers have been accredited and project proposals approved. It is accessible to researchers from all parts of the world and we are particularly keen to welcome researchers from Low- and Middle- Income Countries (LMICs).

<https://www.aridhia.com/covid-19/>





[www.ed.ac.uk/usher/breathe](http://www.ed.ac.uk/usher/breathe)

# BREATHE

## Health Data Research Hub for Respiratory

**HDRUK**  
Health Data Research UK



**UK Research  
and Innovation**



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# Open Science ?

**Open science** is the movement to make scientific research (including publications, data, physical samples, and software) and its [dissemination accessible](#) to all levels of an inquiring society, amateur or professional  
\*Wikipedia (accessed 2021/01/27)

- So now extend data sharing to include analysis code and outputs, and also raw materials (samples)
- Easy to see the attraction, but it will be a challenging (and expensive) journey!