COVID-19 Health Data Research

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Authors:
Andrew Morris, Health Data Research UK
Ben Gordon, Health Data Research UK
Carole Morris, Public Health Scotland
Caroline Cake, Health Data Research UK (lead)
Cathie Sudlow, BHF Data Science Centre
Charlie Davie, DATA-CAN
Clara Fennessy, Health Data Research UK
David Seymour, UK Health Data Research Alliance
John Aston, Home Office (SAGE sponsor)
John Deanfield, NICOR
Mark Parsons, Scotland National Safe Haven
Nilesh Samani, British Heart Foundation
Rhoswyn Walker, Health Data Research UK
Ronan Lyons, SAIL Databank (UKRI/DHSC sponsor)
Sara Hiom, CRUK
Tom Denwood, NHS Digital
Priority research questions, studies & insights – 12 May 2020

1. Why do BAME groups have an increased risk of severe COVID-19 outcomes (RQ34, 37)?
   - University Hospitals Birmingham, Pioneer Health Data Research Hub & DECOVID
   - NHS & PHE
   - CO-CIN
   - ONS & Discover-NOW Health Data Research Hub
   - Imperial College
   - Cumulative, but contradictory insights emerging (see details of insights from individual studies here). No clear understanding of observed patterns at present.
   - Further meta-analysis required to understand variances in observations (ranging from none, to South Asian to Black ancestry impacts) – is this related to confounding e.g. comorbidities or social determinants?
   - Further consortia building ongoing. Likely to require national & more detailed regional/NHS data resources.

2. What impact has COVID-19 having on care home patients? (RQ63)
   - HDR UK North – University of Sheffield & Lancaster
   - Birmingham NHS Trust
   - UCL
   - Bristol
   - Ongoing research
   - Existing research includes: patterns of incidence, infection dynamics, effectiveness of care home testing strategy, impact of hospital discharge patterns.
   - To avoid selection bias – will require national (e.g. HES) and primary care data.

3. How do we best understand and protect vulnerable populations? (RQ 32, 36, 62)
   - HDR UK London (UCL) & Uni of Cambridge and Oxford/Alan Turing Institute
   - Underlying health conditions can increase 1 year risk of during the COVID-19 death fivefold.
   - Lancet publication: 13 May 2020
   - Project in initiation: Understanding vulnerable children using linked NHS Digital (HES), social care and Dept of Education data on ~18million children.

4. What is the impact on treatment and outcomes for non-COVID-19 disease (e.g. cardiovascular) (RQ29)
   - BHF Data Science Centre and UK-wide CVD COVID UK consortium
   - Progress towards establishing a Trusted Research Environment for national English data, similar to those in Wales and Scotland, along with rapid reporting of aggregate data from digitally mature hospitals.
   - Access to data at UK-wide scale enabling impact on a wide range of cardiovascular disorders (acute coronary syndromes, heart failure, stroke, peripheral vascular disease) to be investigated.

5. Do ACE-Inhibitors and ARBs increase the risk of severe COVID-19? (RQ57)
   - King’s College London
   - UCL
   - Bristol
   - BHF Data Science Centre
   - Further evidence confirmed in 1200 acute inpatients in London suggests that there was no evidence for increased severity of disease in patients treated with ACEi or ARB.
   - Significant risk of selection and “collider” bias (see here) makes further analysis essential – primary care data is vital (for any medication prescribed in primary care). Ongoing national collaborative discussions are being led by the BHF data science centre.
**Priorities to scale-up data use:**
1) Access to primary care data
2) Moving projects from development to IG scrutiny

**COVID-19 dataset availability and status of projects using the data – 12 May 2020**

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**# of COVID-19 Projects by TRE stage**

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<tr>
<th>England (NHS Digital Data Processing Service)</th>
<th>Scotland (National Data Safe Haven)</th>
<th>Wales (SAIL Databank)</th>
<th>Northern Ireland (Honest Broker Service)</th>
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<tbody>
<tr>
<td>In development</td>
<td>30</td>
<td>24</td>
<td>31</td>
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<tr>
<td>Submitted for IG approval</td>
<td>2</td>
<td>2</td>
<td>0</td>
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<tr>
<td>Approved but not yet active</td>
<td>2</td>
<td>4</td>
<td>3</td>
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<tr>
<td>Active research taking place</td>
<td>2</td>
<td>3</td>
<td>14</td>
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**1. Good progress collecting and linking large scale datasets across the national capability but progress on primary care data flows remains slow despite its importance to many priority research questions**

**2. Activity within the national TREs is predominantly at an early stage of development**

**3. Existing and new environments with > 10 million primary care population coverage are also being set up and utilised for COVID-19 research**

- Clinical Practice Research Datalink (CPRD) has been running for more than 30 years. It covers 14 million currently registered patients and has 9 approved COVID-19 studies [https://www.cprd.com/protocol-list](https://www.cprd.com/protocol-list)
- OpenSAFELY is a new collaboration between GP System provider TPP with University of Oxford and London School of Hygiene & Tropical Medicine [https://opensafely.org/](https://opensafely.org/). It covers 24 million patients and has work underway across 5 research areas.