HDRuk
Health Data Research UK

Priority research questions

2 April 2020

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There has been a welcome volume of health data research ideas, questions and requests to support the COVID-19 response from the research community. We are capturing these in the HDR UK online COVID-19 Matchmaker tool and need to ensure that time and resources are focused on the right priorities in this fast-moving situation.

This paper shares the HDR UK prioritised questions on **2 April 2020**. These have been selected through a simple prioritisation process (see Appendix) that aims to facilitate a transparent and objective selection of which research questions HDR UK should direct our expertise, time and resources towards. This prioritisation will also be used to support our partners NHSX, NIHR, NHSD and other data custodians in their priorities.

The purpose of this exercise is to ensure that where HDR UK central, data custodian and Alliance support is needed this is aligned to the right questions at the right time. We expect to make this process iterative and we will undoubtedly learn along the way.

Many of the research questions that have not been selected through this process, may of course progress faster and better with no or little additional support from HDR UK, other than the useful connections that are already being made through the Slack channel and other community efforts.

HDR UK Top 10 health data research questions: 2 April 2020

Scored out of 10 (10= High priority, 1 = Low priority) by online panel

Note three questions have been automatically selected as they have already been prioritised by NIHR

ID	Research question	Short question title	Median score
Apr-01	COG-UK Can study of the whole virus genome enable scientists to monitor changes at a national scale, reveal how the virus is spreading and whether different strains are emerging?	COG-UK – whole virus genome?	Auto
Apr-05	ISARIC-CCP What are the clinical characteristics of COVID-19 positive patients; what are the determinants (genetic, other omic, prior medical history, other) of good and poor outcome; and how can knowledge of this help to target clinical and public health strategies?	ISARIC - CCP - clinical characteristics?	Auto
Apr-19	RECOVERY Can Lopinavir-Ritonavir vs Interferon β vs lowdose corticosteroids be effective in treating COVID 19 test +ve hospitalised patients?	RECOVERY clinical trial?	Auto

Apr-06	HDR UK COVID-19 cohorts consortium - What are the determinants (genetic, other omic, prior medical history, other) of acquiring COVID 19 infection in the first place and, once infected of good and poor outcome?	HDR UK COVID-19 cohorts consortium?	8
Apr-08	Can we use data science to support front line decision making in Intensive Care Units? Eg. at the point of peak need, if patient requirements outstrip ventilation capacity, how should hospitals stratify and prioritise patients for ventilation?	Front line decision making in Intensive Care Units?	8
Apr-12	Where hospitals have EHRs is it possible to provide real time data on outcomes per COVID-19 admission by age and by co-morbidities by hospital? To understand whether there are hospitals that appear to have better outcomes for particular co-morbidity sub-groups (indicating potentially more effective interventions to learn from)?	Real time data on outcomes per COVID-19 using EHRs?	8
Apr-20	Is the rubella vaccination (or prior exposure to German measles) protective against COVID-19 due to shared capsid sequence homology between SARS-CoV2 and Rubella?	Rubella vaccine?	8
Apr-32	What is the influence of COVID 19 epidemic in the UK and the NHS response to this on presentation, management and prognosis of non-COVID disease, in particular cardiovascular diseases such as MI and stroke?	Impact on non-COVID disease?	8
Apr-33	What is the influence of pre-existing cardiovascular disease on outcomes of COVID-19 infection?	Pre-existing cardiovascular impact?	8
Apr-34	Can we create and use a high resolution COVID-19 data resource based on data from digitally mature hospital trusts to enable near real time advanced data analytics, producing predictive tools to guide clinical decision making (DeCOVID)?	DeCOVID?	8

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Appendix: Workflow v1

This paper shares the prioritised list, step 4 in the diagram below