COVID-19 FUNDED RESEARCH PROJECTS IN FOCUS

UKCDR
UK Collaborative on Development Research

GLOPID-R

COVID-19 RESEARCH COVID CIRCLE COORDINATION & LEARNING

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Key Findings:

Number of Long Covid projects:

41

Funding investments (known funding amounts):

$21.2m

Top funder:

UKRI

Long Covid

Other names: *Post-acute COVID; Chronic COVID; Long haul COVID*

As the coronavirus pandemic evolves, there is increased interest in the emerging phenomenon, now commonly referred to as "Long Covid", which encompasses a wide spectrum of persistent and newly emerging multisystemic symptoms following COVID-19 infection. These include cough, fatigue, shortness of breath, alterations in taste and smell, depression and mood disturbances (1). Cardiac, pulmonary and renal sequalae may also follow COVID-19 infections. To date, there is a lack of consensus on a clear definition, diagnosis, clinical characterization and management, rehabilitation and appropriate support for sufferers, in addition to difficulties in ascertaining its prevalence (1) (2). Here, we present the scope of funded research activity focusing on various aspects of Long Covid, based on evidence from the first three-month update of the *Living Mapping Review (LMR) of COVID-19 funded research projects* and the UKCDR/GLOPID-R COVID-19 Research Project Tracker.

Methodology

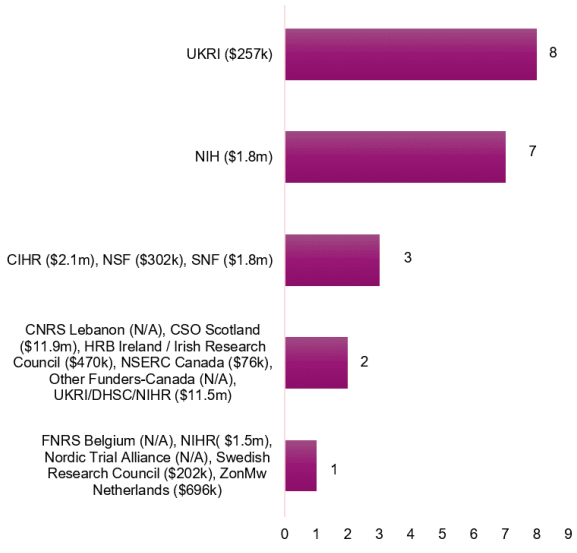
Descriptive and thematic analyses were done as outlined in the LMR study protocol. Projects addressing Long Covid were identified and key funders, funding amounts, country distribution of projects, specific research focus, and study populations were determined.

Findings

Locations, funders and funding amounts

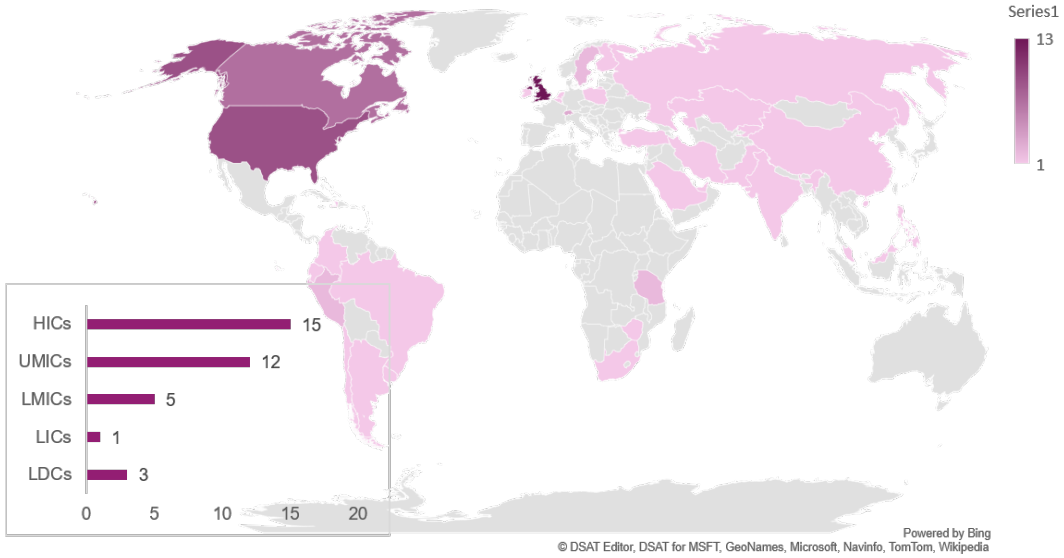
Forty-one Long Covid research projects representing a research funding investment of $21.2m were identified. However, funding amounts were available for only 66% of projects and hence the total funding amount identified is underestimated. Figure 1 shows the 16 funders who funded Long Covid research projects. Of these, UKRI funded the most (8 projects) followed by NIH (7 projects) and no funding information was provided by 4 funders. Research involved at least one of 36 countries, as shown in Figure 2, although one large CIHR-funded project alone took place across 27 countries. Two other projects involved at least two countries. Most projects are taking place in high-income and upper-middle income countries in Europe and the United States.

Figure 1: Funders of Long Covid projects



*Known funding amounts included

Figure 2: Locations of Long Covid projects



Research focus and WHO research priorities

The majority of projects assess brain and central nervous system (CNS) sequalae following COVID-19 infections and most projects focused on determining the spectrum of Long Covid symptoms as well as risk factors for its development, as seen in Figure 3 and Table 1 respectively.

Interestingly, Long Covid was not identified at the time the WHO roadmap priorities were being set and this theme emerged out of the LMR analyses. All but six Long Covid projects fell within the 'clinical characterization and management' priority area. Of these, four fell under 'epidemiological studies', with some being prevalence studies of Long Covid, and two categorised under 'Virus: Natural history, transmission and diagnostics' which investigate the genetic determinants and pathogenesis of Long Covid.

Figure 3: Organ / System of research focus

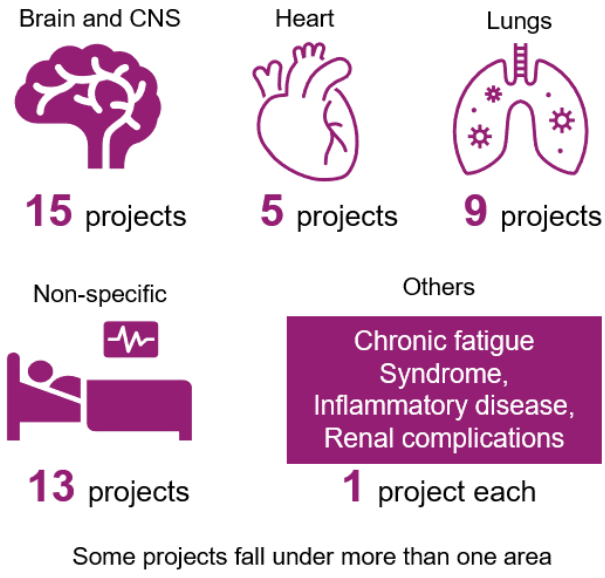


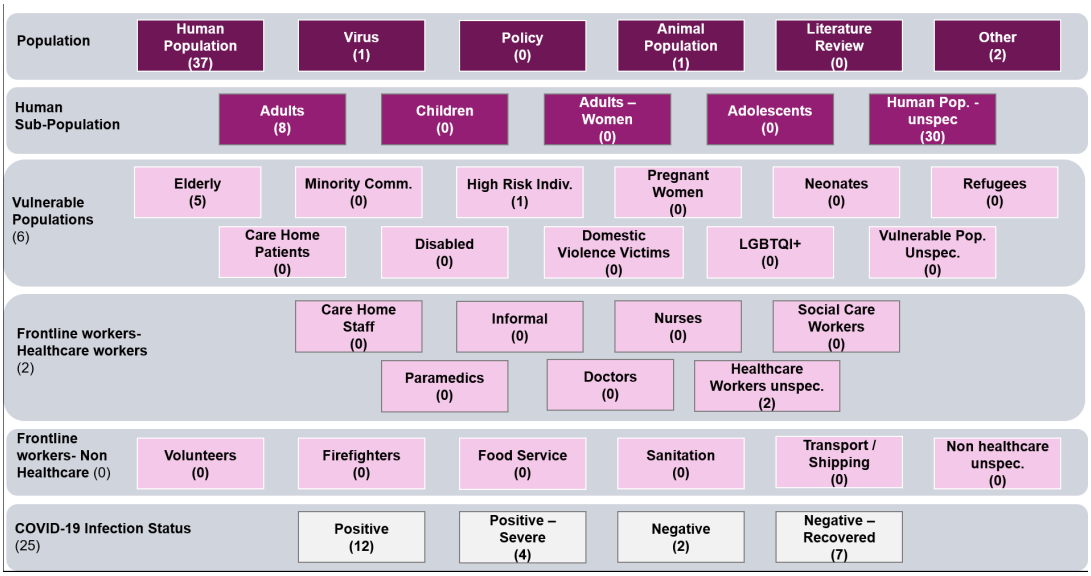
Table 1: Research focus of Long Covid projects

Research focus	No. of projects
Spectrum of long-term symptoms	21
Management	6
Pathogenesis	11
Risk factors	9
Prevalence	3
Diagnosis	3

Study Populations

Ninety-three percent (38 projects) are in human subjects with several studies planned for both recovered and infected patients as seen in Figure 4. However, no Long Covid projects involved children. Two projects were digital innovations for management of Long Covid whilst one investigates Long Covid pathogenesis in animals. Eleven projects are being carried out in newly created or existing research cohorts pivoted for COVID-19 research.

Figure 4: COVID-19 research projects classified using study



Discussion and conclusion

As the COVID-19 pandemic evolves, researchers and funders are adapting research priority areas to emergent needs, highlighted by the expanding spectrum of research activity to further understand Long Covid. Several studies seek to identify risk factors and understand the pathogenesis of these long-term sequalae in order to prevent these after effects or minimise their severity. Identifying the scope of Long Covid symptoms will enable a comprehensive definition, diagnosis and development of treatment protocols. We expect more research activity focusing on rehabilitation and management as the pandemic evolves. The GloPID-R/ISARIC Long Covid meetings, held in early December 2020 was important for identifying priority areas for further research. A publication of the findings from this forum will be disseminated in due course, with recordings of the forum currently available to watch online.

About the UKCDR/GloPID-R Tracker

The UKCDR/GLOPID-R COVID-19 Research Project Tracker (the Tracker) is a live open access database which categorises COVID-19 research activity funded around the world against the WHO research priorities outlined in the WHO Coordinated Research Roadmap. COVID CIRCLE has initiated a Living Mapping Review of these projects, published in Wellcome Open Research, to support funders and researchers in the achievement of a coherent response to this pandemic.

For more on the Tracker and our work on COVID-19, visit: ukcdr.org.uk/covid-circle

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Get in touch

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Notes

Limitations of data and findings: Study protocol is outlined in Living Mapping Review of COVID-19 funded research projects. Analysis was limited by:

- A lack of completeness of funding and/or qualitative data for some projects.
- Tracker data is more likely to be derived from UKCDR and/or GloPID-R funders.
- The absence of commercial research.

References

1. Del Rio C, Collins LF, Malani P. Long-term Health Consequences of COVID-19 [Internet]. Vol. 324, JAMA - Journal of the American Medical Association. American Medical Association; 2020 [cited 2020 Nov 25]. p. 1723–4. Available from: https://jamanetwork.com/
2. Mahase E. Long Covid could be four different syndromes, review suggests [Internet]. Vol. 371, BMJ (Clinical research ed.). NLM (Medline); 2020 [cited 2020 Nov 25]. p. m3981. Available from: http://dx.doi.org/10.1136/bmj.m3981