

# COVID-19 FUNDED RESEARCH PROJECTS IN FOCUS



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## Key Findings:

Number of indirect health impacts projects:

**1593**

Funding investments (known funding amounts):

**\$246.9m**

Top funder:

**NIH**

## Indirect health impacts

To date, the COVID-19 pandemic has claimed over six million lives and devastated health systems across the globe [1, 2]. There have been nearly 600 million known cases worldwide [1]. However, the true scale of the impact of this pandemic remains underestimated as a result of limited evidence on the indirect health impacts secondary to the global pandemic response. Public health interventions (PHIs) instituted to control the spread of COVID-19 have led to disruptions in healthcare delivery, potentially worsening outcomes of other disease conditions, as witnessed in the 2014-2016 West Africa Ebola outbreaks [3]. Indeed, there have similarly been projections of devastating consequences for reproductive, maternal and child health and non-communicable diseases [4, 5]. Further, the wider negative socio-economic implications of lockdowns which exacerbate poverty, particularly in less-resourced countries, intersect with other social determinants of health to promote adverse disease outcomes.

Here, we present the scope of funded research activity focussed on the indirect health impacts of COVID-19, drawing on evidence from the July 2022 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 conducted as outlined in the LMR study protocol. Projects focusing on indirect health impacts of COVID-19 were identified and coded as such. The identified projects include those assessing the disruptions of healthcare services, neonatal, maternal and child health impacts, non-communicable diseases, other chronic disease conditions and mental health. As part of the analysis the following were determined: key funders; funding amounts; country distribution of projects; specific research focus (within indirect health impacts); and study populations.

### Findings

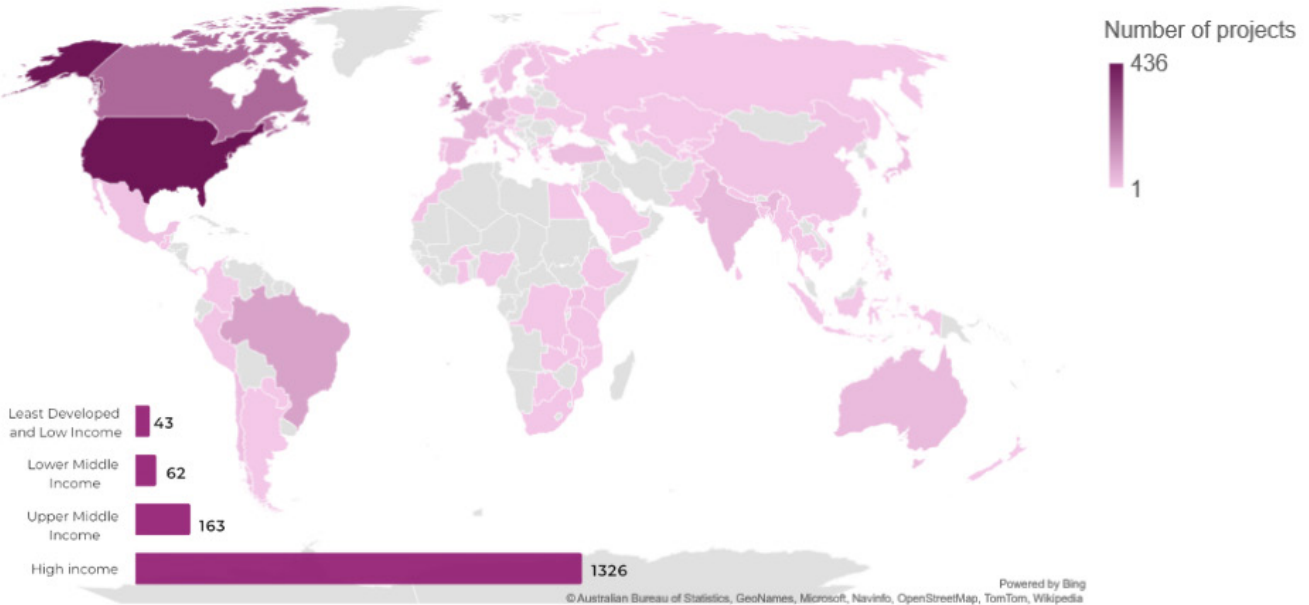
#### *Locations, funders and funding amounts*

Research involved at least one of 82 countries. 37 of these countries are high-income countries and 45 are lower- and middle-income countries (LMICs); of which, 15 are classified among the least developed countries. Whereas 47 percent of the possible 79 high-income countries in the world are represented, only 32 percent of the 46 least-developed countries are [6].

255 projects (16%) took place in at least one LMIC; 43 of these projects took place in at least one least-developed country. However, 1326 (83%) projects took place in at least one high-income country (see Figure 1).

The 1593 projects focusing on indirect health impacts of COVID-19 were funded by at least 163 known funders. The largest number of projects have been funded by the National Institute for Health (NIH) (196), UK Research and Innovation (UKRI) (155) and the Canadian Institutes of Health Research (CIHR) (137). The USA National Science Foundation (NSF) followed closely with 101 projects and the remaining known project funders can be seen in Figure 2.

Figure 1: Locations of projects focusing on indirect health impacts of COVID-19



This is closely in line with the top known funding amounts (with the addition of the Patient-Centered Outcomes Research Institute (PCORI)). NIH invested the most money into projects (where funding amount is known) with \$55.6m, followed closely by UKRI, who contributed \$49.2m in this area of research. PCORI contributed \$24.6m and CIHR \$22.7m. The remaining known funding amounts can be seen in Figure 3.

Figure 2: Research funders investing in indirect health impact research (no. of projects)

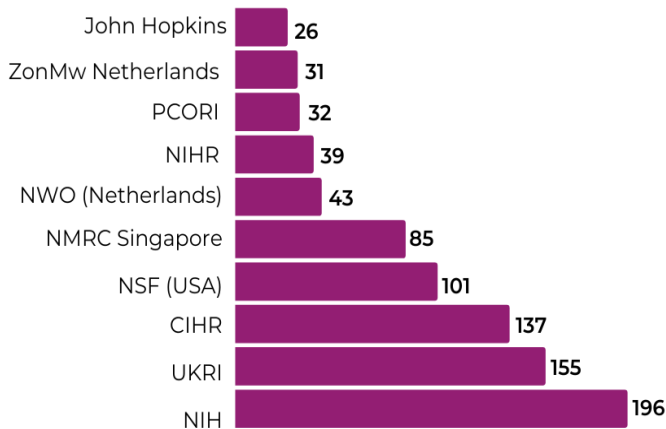
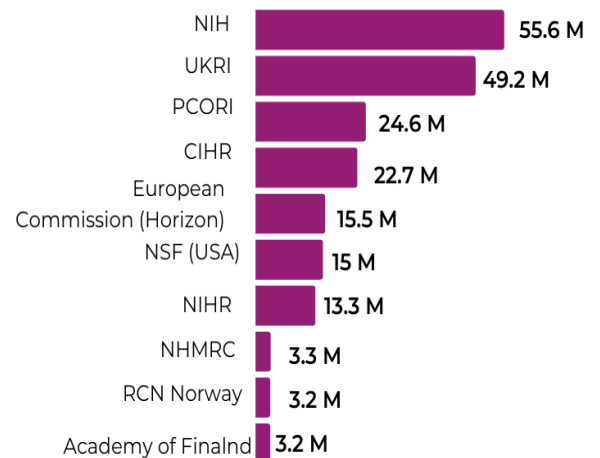


Figure 3: Research funders investing in indirect health impact research - amount invested in projects (USD)



### Research focus and WHO research priorities

When coding projects against the WHO Research Roadmap priorities, nearly 90 percent of projects investigating indirect health impacts were coded as “Social sciences in the outbreak response” (1423). The next highest number was for “Clinical characterization and management” (190), followed by “Infection prevention and control, including health care workers’ protection” (96).

In terms of sub-priorities, 841 projects were coded as N/A (i.e. even if they were within a WHO priority area, they were not within the sub-priority categories outlined by the Roadmap). The next highest numbers were within the areas of acceptance of and adherence to public health measures for COVID-19 prevention and control (375)

and clinical care and health system approaches for supporting the physical health and psychosocial needs of those providing care for COVID-19 patients (125). See Figure 4 and Table 1 for more details.

The types of projects in this category assess or investigate the following (among other things):

- The general impact of the COVID-19 pandemic on healthcare quality, access and utilisation;
- Changes in health-related behaviours, for example diet and/or physical activity;
- The impact of COVID-19 and related restrictions on mental health.

In terms of access to healthcare for non-COVID-related illnesses,

particular attention was paid to the impact of the pandemic on cancer care (60 projects) and HIV care (49 projects).

1085 projects were identified within indirect health impacts as having a focus on mental health; this represents 68 percent of the projects included in the analysis. Most of these projects were coded as “Social sciences in the outbreak response” (1055 projects, 97%). This is shown in Figure 5. When further categorised against the WHO sub-priorities, most projects were categorised outside of them (i.e. as N/A). However, 336 (31%) were coded against acceptance of and adherence to public health measures for COVID-19 prevention and control, and 121 (11%) were coded against clinical care and health system approaches for supporting the physical health and psychosocial needs of those providing care for COVID-19 patients. The others can be seen in Figure 6.

Table 1: Indirect health projects categorised by WHO research sub-priority areas (top 15)

WHO sub-priorities across projects (top 15)	No. of projects
N/A	841
9a. Public health interventions: uptake and adherence	375
9b. Clinical care & health systems: supporting physical health & psychosocial needs of those providing care for COVID-19 patients	125
4d. Processes of care: early diagnosis, discharge criteria & interventions	94
9c. Media communication: awareness, interpretation, fear, anxieties, stigma & trust	91
5d. Compliance with evidence-based IPC interventions	62
4b. Pathophysiology of COVID-19 infection	47
4a. Prognostic factors for severe disease	39
3b. Disease severity	28
5a. Effectiveness of restriction of movement to prevent secondary transmission	24
3a. Transmission dynamics	24
9d. Rapid engagement & good participatory practice (including communities in response)	16
9e. Sexual & reproductive health (mother-to-child transmission, sexual transmission)	14
1d. Characterize immunity	11
8c. The impact of restrictive public health measures	8

Figure 4: Indirect health projects categorised by WHO research priority areas

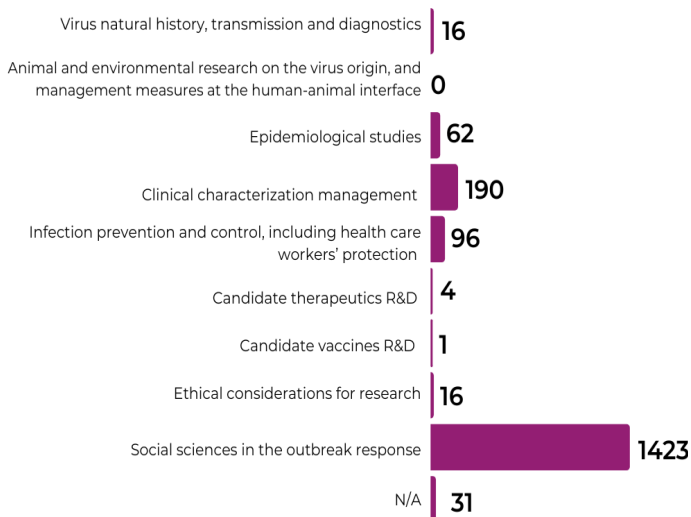


Figure 5: Mental health projects categorised by WHO research priority areas

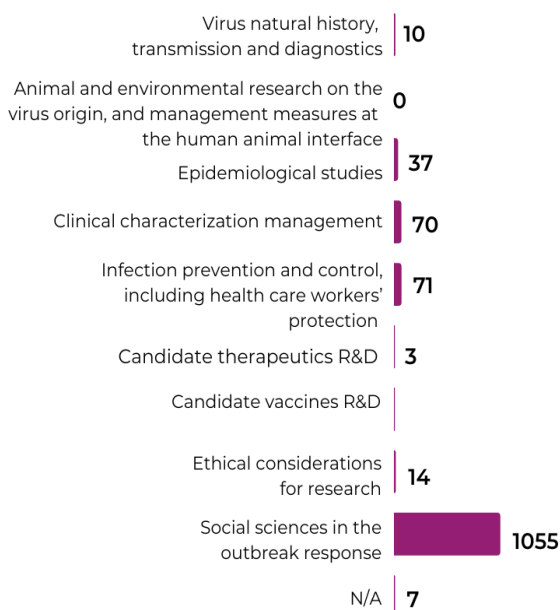


Figure 6: Mental health projects categorised by WHO research sub-priority areas

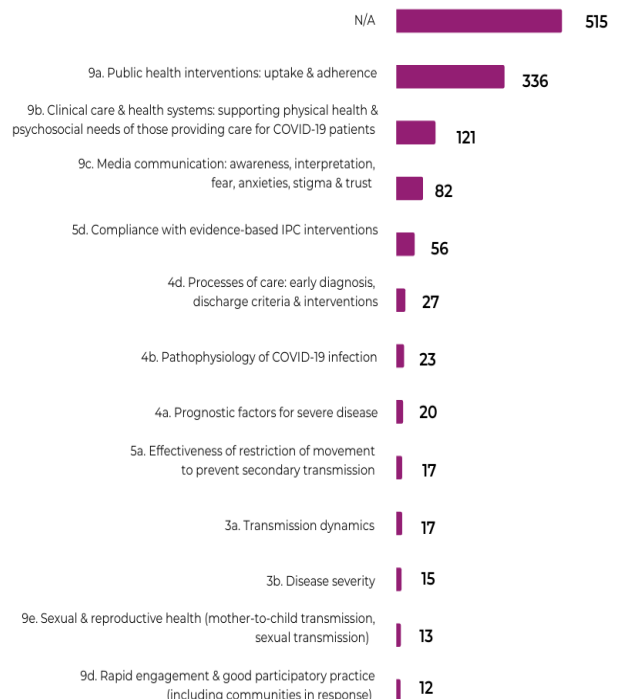
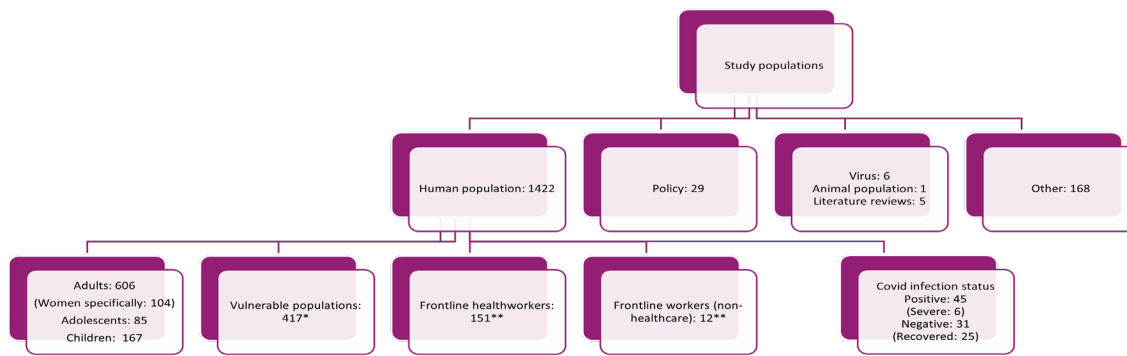


Figure 7: Indirect health impact research projects classified using the study population categorisation system



## Study populations

The vast majority (1422, 89%) of projects studied indirect impacts of COVID-19 in human populations with most of the studies (where it was evident) involving adults (606, 38%) (see Figure 7). Just over a quarter (417, 26%) of projects were coded against ‘vulnerable populations’ (mostly involving the following groups: elderly (116), minority communities (82) and high-risk individuals (70)). There were also a significant number of projects (151) interested in frontline healthcare workers. More detail is presented in Table 2.

## Discussion and conclusion

In conclusion, the analysis of the data coded against indirect health impacts found that there is still limited representation of less-resourced countries in research projects, in line with previous versions of this tracker highlight. This therefore represents a potential gap in funded projects, which requires increased research investment as a priority. Mental health receives a lot of attention from research studies and such studies have helped to reveal how serious an issue mental

Table 2: Study population in more detail for vulnerable populations and frontline workers

	*Vulnerable populations: no. of projects where specified	Frontline workers: no. of projects where specified
Elderly	116	Care home staff 20
Minority communities	82	Nurses 17
High risk individuals (substance abuse, sex work)	70	Doctors 8
Pregnant women	59	Informal 7
Disabled	33	Social care workers 4

health is for people across the world during the COVID-19 pandemic. WHO recently published that the “global prevalence of anxiety and depression increased by a massive 25%” during the first year of the pandemic and urged countries to improve the ways in which they support their populations’ mental health [7]. Research studies in this area will help countries to do that where they find evidence to fill in gaps around mental health.

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

## References

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