

EDITORIAL

Open Access



The many revelations of and about inequality data in the context of COVID-19: introducing a special issue on COVID-19 and inequality

Ahmad Reza Hosseinpoor^{1*}, Devaki Nambiar¹, Katherine Kirkby¹, Ana Lorena Ruano² and Stephen McFeeley¹

COVID-19 has starkly revealed the depth and breadth of health inequities within and across nations. According to the World Health Organization's (WHO's) Coronavirus dashboard, as of 18th December 2022, about 648 million COVID-19 cases have been reported, with over 6.6 million deaths, and 13 billion doses of vaccines have been delivered... but how even has the distribution of these values been, across and within nations, and within population subgroups? Are data available to be able to monitor this?

COVID-19 was a health emergency that triggered a statistical crisis. At a time when information was most needed, many traditional statistical sources dried up, because containment measures during the pandemic dramatically impeded data collection. In May 2020, 96% of National Statistical Offices (NSOs) reported that face-to-face data collection had ceased [1]. During 2020–2021, the years scheduled for the global decennial population and housing census, 68% of NSOs had to postpone their work [1]. These crises were not evenly spread - high income countries were less affected, as they enjoyed

better data infrastructure and more modern data collection systems.

This special issue gathers and presents inequalities in the context of COVID-19, with an emphasis on the analyses, tools, and initiatives of the World Health Organization. This plays an important role, we felt, in revealing, and beginning to address, the core equity issues that COVID 19 has brought to the fore.

Contributions in this special issue include three research papers that draw on global data to describe the nature of inequalities in COVID-19 prevention, testing, and vaccination. Kirkby *et al.* [2] studied education-related inequalities in COVID-19 prevention and testing across 90 countries, showing varying trends across low and lower-middle-income countries compared to high-income countries. Flores and colleagues [3] explored age-related inequalities related to COVID-19 testing, finding that younger populations faced greater financial hardship attributable to testing. Further, Nabaggala *et al.* [4] sought to understand the nature of COVID-19 vaccination coverage among healthcare workers, who were targeted as a priority group in most countries, compared to the general population. They found that vaccine availability and prioritization affected healthcare worker vaccination coverage relative to the general population, following varying geographic patterns.

In addition to research papers using global data, we also focused on the tools used for gathering and analysing data to monitor COVID-19, including inequalities experienced within and between countries during the

*Correspondence:

Ahmad Reza Hosseinpoor
hosseinpoora@who.int

¹ Department of Data and Analytics, Division of Data, Analytics and Delivery for Impact, World Health Organization, 20, Avenue Appia, CH-1211 Geneva 27, Switzerland

² Center for International Health, Department of Global Public Health and Primary Care, University of Bergen, Bergen, Norway



© World Health Organisation 2023. **Open Access** This article is distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 IGO License (<https://creativecommons.org/licenses/by-nc-sa/3.0/igo/legalcode>), which permits any non-commercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made. If you remix, transform, or build upon this article or a part thereof, you must distribute your contributions under the same license as the original. In any reproduction of this article there should not be any suggestion that World Health Organisation or this article endorse any specific organization or products. The use of the World Health Organisation logo is not permitted. This notice should be preserved along with the article's original URL.

pandemic. This includes Allan et al.'s database manuscript, which describes WHO's COVID-19 surveillance database with emphasis on the collection and presentation of disaggregated data [5]. Kirkby et al., in their software paper, present the latest version of the WHO Health Equity Assessment Toolkit (HEAT and HEAT Plus), a software application that facilitates the assessment of inequalities and the computation of summary measures, including examples of how this software has been used to monitor inequalities during the COVID-19 pandemic [6].

This special issue has also raised a clarion call for renewed and redoubled commitments, partnerships, and compacts in service of inclusion of persons with disabilities as part of health emergency responses such as COVID-19, as well as action on the social determinants of health. Pearce and colleagues [7] describe the unique challenges persons with disabilities faced regarding exposure, risk of severe disease, and heightened barriers to service utilization, COVID-19-related and otherwise. Globally issued guidelines often fail to reflect the diversity of circumstances that persons with disabilities face and how these may be redressed through ensuring availability of data and participation from these communities. The paper by Solar, Valentine and colleagues [8] presents a WHO special initiative that has sought to theorise on how action on social determinants of health may move forward, focusing on building models for change, building networks for collaboration and building capacity to think and act across sectors. There is a long way to go to make a transformative change that brings about health equity on the ground, but the commitment and threads of collaboration have emerged.

Placed together, these contributions offer a few broader insights:

First, COVID-19 has shown us the possibility of generating data for global health monitoring in a reasonably granular, disaggregated, and timely manner, often by harnessing technology. This allows for the assessment of inequalities over shorter and longer periods. The one consideration here is that disaggregated data on relevant indicators may not be available or consistent across countries and periods. This points towards the need to create not just core common sets of health indicators but also a set of common disaggregations that should be prioritized in all data systems and research studies. As our issue suggests, it is crucial, in addition, to consider the needs of particular sub-populations. Examples include persons with disabilities, the elderly, and health workers. This could address the global dearth of disaggregated data globally.

Moreover, in contexts where there may be technological constraints, this ought not to stand in the way of

regularly collecting and analysing disaggregated data. Strengthening capacity, offering support, and providing adequate resources for national agencies involved with data collection and curation should be given priority, with an emphasis on countries that are lagging. There must also be room for identifying additional axes of vulnerability or disadvantage that may have arisen during the COVID-19 pandemic (such as carers and health workers).

One other area of emerging importance for inequality is access to, and representation in, data. With the oligopolistic concentration of technology platforms, many data are being made artificially excludable, leading many to argue that growing inequalities in access to data and information are creating a new inequality frontier between the data haves and have-nots. Meanwhile, the digital-divide has created a data-divide, where those without access to technology or broadband are not represented in many digital datasets.

Further, understanding inequalities using quantitative analyses is necessary but insufficient to address inequities. Areas of inquiry, including in pandemic settings, should include more contextually driven, qualitative analyses of community experiences, patient pathways, governance achievements, challenges and insights, as well as forms of collaboration and competition that affect the distribution of resources, disadvantage, and disease within and across nations.

To conclude, the urgency of action on inequities concerning pandemics is apparent. This will have to be supported by inequality monitoring with regular and in-depth analysis of inequalities across the care spectrum, using both quantitative and qualitative studies on how inequities manifest and also what approaches offer promise in redressing them.

Disclaimer

The authors alone are responsible for the views expressed in this article and they do not necessarily represent the views, decisions or policies of the institutions with which they are affiliated.

About this supplement

This article has been published as part of *International Journal for Equity in Health* Volume 21 Supplement 3, 2022: COVID-19 and inequality. The full contents of the supplement are available online at <https://equityhealthj.biomedcentral.com/articles/supplements/volume-21-supplement-3>.

Authors' contributions

All authors contributed to writing the editorial. The authors read and approved the final manuscript.

Funding

Funding for the journal special issue has been provided by Global Affairs Canada (GAC).

Declarations

Competing interests

The authors declare that they have no competing interests.

Published: 26 January 2023

References

1. United Nations and World Bank. (2020). Monitoring the State of Statistical Operations under the COVID-19 Pandemic. 5 June 2020. Available at: <https://documents1.worldbank.org/curated/en/338481591648922978/pdf/Monitoring-the-State-of-Statistical-Operations-under-the-COVID-19-Pandemic.pdf>. [Accessed: 15 Nov 2022].
2. Kirkby K, Bergen N, Fuertes CV, Schlotheuber A, Hosseinpoor AR. Education-related inequalities in beliefs and behaviors pertaining to COVID-19 non-pharmaceutical interventions. *Int J Equity Health*. 2022;21(Suppl 3):158. <https://doi.org/10.1186/s12939-022-01751-z>.
3. Flores G, Abbasi A, Korachais C, Lavado R. Unaffordability of COVID-19 tests: assessing age-related inequalities in 83 countries. *Int J Equity Health*. 2022;21(Suppl 3):177. <https://doi.org/10.1186/s12939-022-01784-4>.
4. Nabaggala MS, Nair TS, Gacic-Dobo M, et al. The global inequity in COVID-19 vaccination coverage among health and care workers. *Int J Equity Health*. 2022;21(Suppl 3):147. <https://doi.org/10.1186/s12939-022-01750-0>.
5. Allan M, Lievre M, Laurenson-Schaefer H, De Barros S, Jinnai Y, et al. The World Health Organization COVID-19 surveillance database. *Int J Equity Health*. 2022;21(Suppl 3):167. <https://doi.org/10.1186/s12939-022-01767-5>.
6. Kirkby K, Schlotheuber A, Fuertes CV, Ross Z, Hosseinpoor AR. Health Equity Assessment Toolkit (HEAT and HEAT Plus): exploring inequalities in the COVID-19 pandemic era. *Int J Equity Health*. 2022;21(Suppl 3):172. <https://doi.org/10.1186/s12939-022-01765-7>.
7. Pearce E, Kamenov K, Barrett D, et al. Promoting equity in health emergencies through health systems strengthening: lessons learned from disability inclusion in the COVID-19 pandemic. *Int J Equity Health*. 2022;21(Suppl 3):149. <https://doi.org/10.1186/s12939-022-01766-6>.
8. Solar O, Valentine N, Castedo A, Brandt GS, Sathyandran J, et al. Action on the social determinants for advancing health equity in the time of COVID-19: perspectives of actors engaged in a WHO Special Initiative. *Int J Equity Health*. 2023;21(Suppl 3):193. <https://doi.org/10.1186/s12939-022-01798-y>.

Publisher's Note

Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Ready to submit your research? Choose BMC and benefit from:

- fast, convenient online submission
- thorough peer review by experienced researchers in your field
- rapid publication on acceptance
- support for research data, including large and complex data types
- gold Open Access which fosters wider collaboration and increased citations
- maximum visibility for your research: over 100M website views per year

At BMC, research is always in progress.

Learn more biomedcentral.com/submissions

