



# Global Health Inequalities: Research for a fairer future

## Workshop Report

March – June 2022



Under the umbrella of the InterAcademy Partnership (IAP), more than 140 national, regional and global member academies work together to support the vital role of science in seeking evidence-based solutions to the world's most challenging problems. In particular, IAP harnesses the expertise of the world's scientific, medical and engineering leaders to advance sound policies, improve public health, promote excellence in science education, and achieve other critical development goals.

IAP's four regional networks - AASSA, EASAC, IANAS and NASAC - are responsible for managing and implementing many IAP-funded projects and help make IAP's work relevant around the world. More information about IAP can be found at [www.interacademies.org](http://www.interacademies.org), on Twitter at [@IAPPartnership](https://twitter.com/IAPPartnership), on [LinkedIn](#) and [YouTube](#).



The Academy of Medical Sciences is the independent, expert voice of biomedical and health research in the UK. Our mission is to help create an open and progressive research sector to improve the health of people everywhere. The Academy's elected Fellows are the United Kingdom's leading medical scientists from the NHS, academia, industry and the public service. We work with them to improve lives, strengthen research, support researchers, work globally and build our resources.

Opinions expressed in this report do not necessarily represent the views of all participants at the event, the Academy of Medical Sciences, InterAcademy Partnership for Health, or its Fellows.

All web references were accessed in July 2022

This work is © The Academy of Medical Sciences and is licensed under Creative Commons Attribution 4.0 International

# Global Health Inequalities: Research for a fairer future

## **The role of research in supporting access to quality and robust health services**

### **Contents**

Executive summary .....	4
Introduction.....	6
Lessons learned from the COVID-19 pandemic.....	8
A pathway to recovery .....	10
The health research response – emerging themes .....	12
Conclusions .....	18
Appendix 1: Workshop steering committee.....	19
Appendix 2: Participant list.....	20

# Executive summary

---

**The COVID-19 pandemic has had a particularly severe impact on disadvantaged and marginalised populations. Typically, they have experienced higher levels of SARS-CoV-2 infection, at least in the early stages of the pandemic, and worse health outcomes. They have also been more impacted by the indirect effects of the pandemic, such as reduced access to other health services and disrupted education.**

These trends have been overlaid on existing health inequalities, with disadvantaged groups within countries already experiencing shorter life expectancies, a greater burden of ill-health and less access to quality health services. Reducing health inequalities will depend critically on the drive towards universal health coverage (UHC), embedded within Sustainable Development Goal 3.8, which seeks to ensure that all people, whatever their circumstances, have access to quality healthcare without facing the risk of financial impoverishment.

During March–June 2022, the UK Academy of Medical Sciences and the InterAcademy Partnership organised a series of workshops, at which participants from a broad range of countries shared their experience of the COVID-19 pandemic's impact on health inequalities, with a specific focus on the role of Universal Health Coverage. The aim of the workshops was to identify priority areas for research into such inequalities as the world recovers from the acute phase of the pandemic.

Presentations and discussions at the workshops noted that **different populations have been disproportionately affected by the COVID-19 pandemic in different ways**. Typically, these have included ethnic minority populations, migrants and mobile populations, internally displaced people, and people who are socioeconomically disadvantaged or socially marginalised.

Furthermore, there have been **multiple contributory factors** underlying this selective vulnerability, affecting risk of exposure, access to services, take up of vaccination and underlying health risks. Most of these vulnerabilities are not specific to COVID-19 but reflect an increased risk of multiple poor health outcomes. COVID-19 has shone light on, and often exacerbated, existing health inequalities affecting disadvantaged and marginalised communities.

These vulnerabilities typically reflect the impact of **social determinants of health**. Factors linked to socioeconomic disadvantage and unhealthy physical and social environments affect multiple aspects of disease exposure, risk of physical and mental health co-morbidities, and access to care.

As countries recover from the acute phase of the pandemic, there are opportunities to **learn the lessons from the response to the COVID-19 pandemic** and leverage such learnings to accelerate the drive towards UHC and mitigate health inequalities. There is a need to better understand the nature and causes of health inequalities in different settings, to develop new interventions to address them, and to promote health emergency preparedness with an explicit focus on equity. **The research community therefore has a critical role to play in generating the evidence to shape the path to recovery and a future where good health is more equally shared.**

Although each country faces a unique combination of health inequality challenges, **international comparisons and collaborations** provide opportunities for sharing of experience and evidence, so countries can jointly address common challenges and evaluate potential solutions, sharing knowledge among themselves and with others. To facilitate this mutual exchange, workshop participants developed the following framework to guide an internationally coherent research response to health inequalities, as part of the drive towards UHC.

### Engaging with communities...

**Community engagement:** *Involving marginalised populations in research.*

Prioritising deep and meaningful engagement with affected communities, developing relationships and building trust, liaising closely with community leaders and Non-Governmental Organisations (NGOs) /Civil Society Organisations (CSOs) and involving communities in all settings at all stages of research from priority setting to co-design of interventions and evaluations, as well as in the implementation of interventions.

### Understanding the issues...

**Data:** *Collecting and using data to understand health inequalities and root causes.*

Standardising collection, storage and sharing of high-quality data on key health and social indicators, including 'health inequality audits', to identify key inequality challenges and the barriers to equitable health outcomes.

### Making a difference...

**Interventions and action research:** *Identifying what works to reduce inequalities.*

Undertaking a wide variety of research, including cohort, natural experiment and other observational studies, action research, implementation research, health systems research, health economics research, policy research and clinical trials, to develop and promote the scale up of interventions that successfully reduce health inequalities; such studies should take a broad perspective, recognising the complexity of the context in which health inequalities arise and are perpetuated, and the critical importance of primary healthcare in delivering essential services to all.

### Preparing for the next crisis...

**Pandemic/emergency preparedness:** *Anticipating the next pandemic/health crisis.*

Research to learn lessons from the COVID-19 pandemic to inform the development of more effective health emergency responses and to promote 'embedded preparedness' – response strategies integrated into day-to-day health service activities; these should include plans that more explicitly include an equity focus and anticipate/mitigate 'collateral damage' to other services.

### Collaborating to achieve more...

**Interdisciplinary responses:** *Working together to advance the research agenda.*

Embracing an integrated interdisciplinary approach by bringing together researchers with expertise in medical, social, epidemiological, economic, demographic, ethics and other domains, and with interests in areas such as equity, gender and race.

The above framework has also been published separately in a joint communique endorsed by the IAP and Academy of Medical Sciences. As well as researchers, this framework could be of value to other stakeholders, including funders and policymakers. For example, it could help funders prioritise areas for support, generate more specific research questions, and identify the kind of research studies they could envisage supporting. Notably, the workshops highlighted the potential value of international comparisons and collaboration, raising the prospect of comparative studies spanning high-, low- and middle-income settings to identify effective strategies for addressing health inequalities by extending access to quality care.

# Introduction

**The COVID-19 pandemic has placed unprecedented strains on health systems and public health. Early in the pandemic, health services faced a surge of COVID-19 cases, while infections among healthcare workers reduced the numbers of staff available to care for patients. In many countries, public health and social measures were initially introduced to ‘flatten the curve’, and to reduce the speed with which people were infected so that care services were not overwhelmed.**

The pandemic has also had significant indirect effects. It led to considerable disruption of other routine services, such as immunization and family planning, as well as cancellation of elective surgery, as healthcare workers were diverted to COVID-19 care or people were unable or unwilling to use healthcare services.<sup>1</sup> Public health and social measures had other unintended public health consequences, such as reducing levels of physical exercise, increasing obesity, and in many cases having a harmful impact on mental health.<sup>2</sup> Indirect effects extend beyond health, including impacts on young people’s education due to disrupted schooling.

During the COVID-19 pandemic, disadvantaged populations have typically been those most severely affected.<sup>3</sup> They have been more likely to be infected with SARS-CoV-2 (at least early in the pandemic) and experienced worse health outcomes.<sup>4,5</sup> They have been more likely to lose access to other services and been most adversely affected by public health and social measures. These trends have been overlaid on existing health inequalities, with disadvantaged groups within countries generally having shorter life expectancies and experiencing a greater burden of disease pre-pandemic.

The drive towards universal health coverage (UHC), enshrined in the Sustainable Development Goals (SDG target 3.8: achieve universal health coverage, including financial risk protection, access to quality essential health care services and access to safe, effective, quality and affordable essential medicines and vaccines for all)<sup>6</sup>, has the potential to reduce health inequalities. However, according to the UHC service coverage index indicator<sup>7</sup>, no country has yet achieved full coverage.

In March–June 2022, the UK Academy of Medical Sciences and the InterAcademy Partnership organised a series of workshops to enable participants from a broad range of countries to share their experience of the COVID-19 pandemic’s impact on health inequalities, to discuss how research could help to address such inequalities as the world begins to recover from the acute phase of the pandemic, and to identify priority areas for research. The workshops had a particular focus on primary healthcare and UHC as the key route to address health inequalities, building on previous Academy workshops exploring how research could contribute to UHC in different global settings.<sup>8,9,10,11</sup>

1. [https://www.who.int/publications/i/item/WHO-2019-nCoV-EHS\\_continuity-survey-2022.1](https://www.who.int/publications/i/item/WHO-2019-nCoV-EHS_continuity-survey-2022.1)
2. Mansfield KE, Mathur R, Tazare J et al. Indirect acute effects of the COVID-19 pandemic on physical and mental health in the UK: a population-based study. *Lancet Digit Health*. 2021;3(4):e217-e230. doi: 10.1016/S2589-7500(21)00017-0.
3. Hughes GD, Mbamalu ON, Okonji CO, Puoane TR. The Impact of Health Disparities on COVID-19 Outcomes: Early Findings from a High-Income Country and Two Middle-Income Countries. *J Racial Ethn Health Disparities*. 2022;9(1):376-383. doi: 10.1007/s40615-021-00999-5.
4. Bambra C, Riordan R, Ford J, Matthews F. The COVID-19 pandemic and health inequalities. *J Epidemiol Community Health*. 2020;74(11):964-968. doi: 10.1136/jech-2020-214401.
5. Clark E, Fredricks K, Woc-Colburn L et al. Disproportionate impact of the COVID-19 pandemic on immigrant communities in the United States. *PLoS Negl Trop Dis*. 2020;14(7):e0008484. doi: 10.1371/journal.pntd.0008484.
6. United Nations. SDG Goal 3: Ensure healthy lives and promote wellbeing for all at all ages. <https://sdgs.un.org/goals/goal3>
7. <https://www.who.int/data/gho/data/indicators/indicator-details/GHO/uhc-index-of-service-coverage>
8. <https://acmedsci.ac.uk/policy/policy-projects/research-and-universal-health-coverage-in-low-and-middle-income-countries>
9. <https://acmedsci.ac.uk/policy/policy-projects/advancing-universal-health-coverage-in-the-middle-east-and-north-africa-the-role-of-research->
10. <https://acmedsci.ac.uk/policy/policy-projects/universal-health-coverage-and-role-of-quality-of-care-research-in-sub-saharan-africa>
11. <https://acmedsci.ac.uk/policy/policy-projects/universal-health-coverage-and-role-of-quality-of-care-research-in-latin-america>

The workshops included a series of short presentations highlighting challenges in high-, middle- and low-income countries, panel discussions and breakout groups, with participants drawn from 25 countries at varying levels of economic development.

The goal of the workshops was to identify priorities for further research with the objective of addressing health inequalities by advancing the UHC agenda. This report summarises discussions from the workshops and sets out a framework for taking forward research into UHC and health inequalities in a systematic and coordinated fashion internationally, to facilitate sharing and synthesis of evidence from different national settings.

# Lessons learned from the COVID-19 pandemic

**Populations affected:** Workshop contributions from different regions and countries made it clear that the populations most severely affected during the COVID-19 pandemic varied according to setting. Often, members of **underserved and underrepresented racial and ethnic groups** were badly affected, including 'first nation' groups. Other particularly vulnerable groups included **refugees and internally displaced populations**. Of indigenous groups, **socially marginalised** (including LGBTQ+ communities) and **socioeconomically disadvantaged** people were typically at highest risk of poor COVID-19-related health outcomes. There were also **gender and sex-based inequalities**, with maternal and perinatal health disproportionately affected by disruptions and closures to routine services. In some settings, people with long-term health conditions, including TB, HIV/AIDS or cancer, were affected by the loss of health services due to prioritisation of COVID-19 responses.

Pre-pandemic, these populations were generally **underserved**, with limited access to healthcare and social services. This partly reflects geographical challenges, for remote rural populations, or ways of life, for mobile and pastoralist populations. Migrant workers face multiple challenges, particularly when outside their home countries. Undocumented migrants may be reluctant to interact with any local services because of fear of incarceration or deportation. Host countries often have an ambivalent attitude to such workers, exploiting their willingness to work but providing limited social support. They may also suffer appreciable levels of stigmatisation.

**Contributory factors:** Discussions also highlighted the wide range of factors that contributed to worse outcomes among disadvantaged groups. One key factor has been **differential exposures**, for example due to overcrowded housing or the nature of people's occupations: disadvantaged groups were often disproportionately represented in occupations that brought them into regular contact with other people (such as care workers or bus drivers). Although many countries organised social support systems during the pandemic, these were not always sufficient to enable people in insecure employment or in the informal sector to stop work and self-isolate: economic survival meant continuing to work and accepting the risk of infection.

A further contributory factor relates to **inequalities in access to quality care services**. At the early stages of the pandemic, access to diagnostics and testing, treatments and general healthcare services was not equal either between or within countries. Even when access was available to a large proportion of the population, the quality of services was often far from uniform, leading to 'tiered' health systems. Access to vaccination differed markedly between countries throughout 2021, when vaccine supplies were limited. Countries have in general prioritised the most at-risk populations (such as older people and those with underlying health conditions) but, within these categories, access to vaccination services has not always been equitable.

Unequal access to and take up of **testing** has also contributed to health inequalities. In many countries, testing required travel to health facilities, or financial barriers deterred take up of testing services. For those needing to work, there was an active incentive not to get tested to avoid the requirement to self-isolate.

In many cases, **lockdown measures** disproportionately affected disadvantaged and marginalised populations. Many people faced extended time in difficult living conditions and restrictions that curtailed their economic opportunities, exacerbating financial hardship; flexible working was less available to non-professional occupations. People from socially disadvantaged communities generally had less space to live in and less access to green space outside the home. Women were particularly affected by an increase in interpersonal violence.



Nevertheless, some countries took measures to protect vulnerable groups such as those experiencing homelessness and introduced social support systems (although the generosity of these measures varied markedly between countries).

Even when healthcare services are available, **uptake of such services** has often shown variation that has contributed to COVID-19-related health inequalities. A wide range of sociocultural factors are likely to contribute to these differences, including limited access to information about vaccination or other services, lack of awareness of how to utilise services, differing perceptions of the threat posed by COVID-19 and the risks associated with interventions such as vaccination, and lack of trust in medical and other authorities. User fees for testing services also added an economic barrier to uptake in some countries.

Workshop participants also noted that disadvantaged populations showed **higher initial vulnerability**, mostly linked to **social determinants of health**. It is well recognised that multiple social determinants, including the availability of clean water and sanitation, exposure to atmospheric pollutants, access to high-quality diets, educational opportunities and socioeconomic status, have a major impact on health. Disadvantaged populations therefore started with a health disadvantage, including high levels of co-morbidities that were significant risk factors for severe COVID-19 disease.

**An unlevel playing field:** These factors all contributed to an unlevel playing field in which members of disadvantaged communities were at **heightened risk of poor outcomes** when the pandemic struck. Furthermore, very few of these susceptibilities were specific to COVID-19 – most related to all forms of health outcomes, across physical and mental health. Rather than creating new inequalities, COVID-19 therefore shone a dramatic light on – and exacerbated – many existing health inequalities that had long existed within countries.

However, participants also noted that, in many settings, the differential impact of the COVID-19 pandemic could not be determined with any certainty because of a lack of data on disease burden and outcomes in different populations.

# A pathway to recovery

**The COVID-19 pandemic has brought health inequalities into the spotlight. The pathway to recovery from the pandemic therefore offers new opportunities to address health inequalities, and also to design pandemic response strategies and plans that have a stronger focus on equity to ensure that future responses do not have such disproportionate impacts on disadvantaged populations.**

This thinking has underpinned the development of the **UN Research Roadmap for the COVID-19 Recovery**<sup>12</sup>, published by the UN in November 2020, which sets out an agenda for learning from the pandemic to underpin recovery strategies focused on the achievement of SDG goals and a 'more equitable, resilient and sustainable future for all'. Created through an extensive global consultative process, the UN Research Roadmap sets out 25 key research priorities across five UN pillars (**see Box**).

## Box 1: UN Research Roadmap

**The UN Research Roadmap for the COVID-19 Pandemic, published in November 2020, mapped out a pathway by which research efforts could contribute to renewed momentum towards the Sustainable Development Goals, drawing on evidence-based strategies.**

The Roadmap was developed through an extensive global collaborative process, focusing on the transformative changes required to create 'an equitable, resilient and sustainable future'.

The Roadmap outlines a set of 25 research priorities within the five pillars of the UN's socioeconomic recovery framework – health systems and services, social protection and basic services, economic response and recovery programmes, macroeconomic policies and multilateral collaboration, and social cohesion and community resilience. Within each research priority are a set of subsidiary questions setting out specific gaps in knowledge.

One of the three priority country-level recommendations within the health systems and services pillar is to 'focus on the most vulnerable by ensuring the continuity of services in fragile settings and supporting efforts to reach marginalised populations.

Of particular note, the COVID-19 pandemic **catalysed multiple changes**, for example in the speed of collection, use of and sharing of data, in the governance of research, and in medical practice. In some areas it has shifted expectations: if new practices were feasible for COVID-19, it has been argued, then they should also be applicable to other conditions.

12. <https://www.un.org/en/coronavirus/communication-resources/un-research-roadmap-covid-19-recovery>

Changes to **research oversight procedures**, for example, made it easier to conduct research and accelerated approval processes for new interventions, and facilitated novel data linkage studies; it is hoped that such changes can be embedded in routine regulatory practice. The pandemic also led to growing use of **digital tools** and other telemedicine applications. These are more convenient for many patients and can improve the efficiency of healthcare delivery, but the potential risk of 'digital exclusion' and of biases in AI applications compounding health inequalities needs to be recognised.

Recovery will also require attention to the healthcare **backlog** created by diversion of resources to COVID-19 responses, which led to many procedures and care programmes being delayed or interrupted. It will be important to ensure that efforts to address this backlog also focus on equity to avoid a further worsening of health inequalities.

# The health research response – emerging themes

---

Focusing particularly on health systems and UHC, workshop discussions explored the nature and causes of health inequalities highlighted by the COVID-19 pandemic, and the potential role of health research in addressing them. These discussions revealed that there were many similarities between countries, but also that each country faced a specific set of challenges, depending on multiple factors such as demography, economic maturity, geography, political system, colonial history, social welfare priorities and policies, attitudes to migrant populations and immigrants, and healthcare system policies and practices.

Solutions will therefore need to be crafted at a regional and national level, and tailored according to local contexts. Nevertheless, workshop discussions were able to develop a set of priorities that can act as a **conceptual framework** to guide future research on health inequalities, recognising that a systematic and coordinated approach to developing local research agendas had multiple advantages, including opening up more opportunities to share evidence and experiences and enabling countries to learn from one another. This framework comprises six core themes.



### Engaging with communities...

**Community engagement:** *Involving marginalised populations in research.*

Participants agreed that research on health equalities needed to be carried out with the approval, support and active involvement of communities affected, calling for **deep and meaningful community engagement** based on **equitable partnerships** between researchers and communities. As lack of trust is often an important factor contributing to health inequalities, particular efforts are required to build and sustain trust with relevant communities.

It was recognised that trust takes time to build and is easily lost. Relationship-building exercises may need to be routed through **trusted intermediaries**, community leaders and other people of influence in the community. Religious institutions may be important contact points, and religious authority figures can be important advocates for health and research. However, it is also important to consider how representative and locally endorsed community leaders are, and whether marginalised subgroups within a community are effectively represented.

As well as community members themselves, **non-governmental organisations (NGOs) and civil society organisations (CSOs)** may be an important route into communities. NGOs/CSOs are likely to have strong existing relationships with communities and engaging with NGOs/CSOs can help researchers gain access to and build trust with communities more easily. The support of NGOs/CSOs can also help to facilitate research studies and ensure good participation. Engagement with other stakeholders, such as the media, can help to ensure that relationships are not undermined by inaccurate information or negative reporting.

Participants also emphasised that community engagement needed to be firmly embedded across all research activities and not tokenistic. There are important opportunities to engage with communities on **priority setting** for research, so that the questions addressed are those that matter most to communities. As well as delivering more actionable results, this will help to ensure stronger commitment and buy in to research among communities.

Similarly, communities and their representatives should be engaged in the **co-design of interventions** and methods of evaluation, and in implementation, strengthening the likelihood that they will achieve their desired impact. Communities need to be empowered to ensure that they can play these key roles effectively.

Throughout, it is important that culturally appropriate approaches are adopted according to the nature of communities being studied, with research tools modified as necessary to collect relevant data. As well as translation of some research tools into local languages, further adaption may be needed to make them relevant to local settings, while maintaining the theoretical framework in which they were developed. Participants also suggested that this cultural sensitivity could be facilitated by greater **diversity and inclusivity within research teams**.

Participants highlighted the importance of **community heterogeneity**. Disadvantaged groups may not be ethnically or socially homogenous, which has implications for the collection of data (which needs to be sufficiently granular to distinguish between different ethnic or social groups) and for involvement in research activities.



### Understanding the issues...

**Data:** *Collecting, sharing and using data to understand health inequalities and root causes.*

Delegates agreed that more data is needed to **map and understand existing health inequalities**, to inform the development of strategies and plans to reduce inequalities. In many countries, more work needs to be carried out to provide a fuller understanding of the extent of health inequalities and the populations affected. As well as suggesting where targeted action needs to be taken, such data can also provide indicators for tracking progress in addressing inequalities.

It was also emphasised that, as far as possible, data should be captured in **standardised formats** across different countries. This will ensure that all relevant data are collected (in some settings, key information such as gender or ethnic background is not always obtained) and that data can be compared and synthesised to generate new insights. It was argued that standardised **'health inequality audits'** should be regularly carried out by national and/or subnational health authorities to track inequalities and guide action.

Participants highlighted the importance of a **cross-sectoral approach** to data collection. Health inequalities are strongly influenced by social determinants and also have consequences that extend beyond the medical domain, for example into educational achievement and earning potential. Gathering a holistic picture of these influences and impacts therefore requires integration of data from multiple sources, social as well as medical, potentially requiring novel forms of data linkage. Again, cross-national consistency in this data collection will facilitate comparisons and evidence syntheses.

It was suggested that a key role for local data gathering should be to provide the evidence to support quality improvement in health systems. Wherever possible, it was suggested that data collection should draw upon the indicators developed for other initiatives, such as monitoring progress towards the Sustainable Development Goals, rather than being created anew, so that data analyses sit within a well-established global context. Ideally, such data should be harvested directly from routine practice.

An important challenge will be to ensure the **quality and reliability** of data. New approaches may be needed for integration of data from different sectors (e.g. from the private and informal sector as well as the public sector). It may also be necessary to build capacity in data use to ensure that data are used to drive action. New systems may be needed for country-level data reporting and storage, and to ensure researcher access, underpinned by effective national data governance systems.

All these activities will support **'sharing and comparing'**. While each country faces a unique set of challenges, there are still opportunities to learn from the approaches being taken by other countries. International comparisons could also enable countries to judge how well they are faring on key indicators of health inequality compared with their peers. An **'open data'** approach is important to ensure that data is widely available for comparison and analysis.

An additional important consideration is how best to **share evidence to inform policy and practice**. The findings of research are typically published in the academic literature, but this is rarely a format usable by policymakers and other stakeholders who will be central to driving forward change.

However, in some settings basic data records such as birth and death registration have yet to be introduced. In addition, cause of death may not be recorded according to standardised coding systems at the health facility level or in communities. The lack of such basic data makes it difficult to generate a clear picture of health inequalities at the local level.

Moreover, it was recognised that health information systems in some settings are relatively weak and will need strengthening in order to provide data useful for decision-making. In some settings, where paper-based records predominate, this will require accelerated digitalisation of health system data collection. If necessary, data collection could initially focus on broad measures, such as excess mortality.



### Making a difference...

**Interventions and action research:** *Identifying what works to reduce inequalities.*

Mapping and tracking health inequalities provides the key evidence of the nature and scale of the problem, and raises awareness of the need for action, but delegates also stressed that research must also be focused on the design of **interventions to reduce inequalities**. The generation of evidence will be vital in designing such interventions and informing implementation.

Many different types of intervention research can be envisaged. **Randomised controlled trials** provide a high standard of evidence; however, some types of intervention research questions can be challenging to design, labour-intensive and expensive. It might also be difficult to ensure representative participation of different social groups. Furthermore, the complexity of settings can make strictly defined interventions difficult to implement and raises questions about the generalisability of findings. Nevertheless, standardised protocols can enable sites to rapidly instigate trials (as seen with the extension of the UK RECOVERY trial to countries such as Indonesia and Nepal) while global platforms such as the WHO SOLIDARITY trial can enable countries to contribute to collaborative research studies. Such activities require concerted and coordinated global efforts and functioning health systems able to rapidly launch high-quality research studies.

Other possible approaches include **observational studies**, for example drawing upon existing cohorts where demographic and health information is already available or could readily be collected. Research could also gather evidence from evaluation of programmatic implementation or innovations, for example through **action research projects** or **implementation research**, or by assessment of 'natural experiments', where 'before and after' comparisons can be made or outcomes in two or more areas with diverging contexts can be compared. **Surveys** of knowledge, attitude and practice can rapidly generate evidence to inform control measures and public communication. **Policy research** could be used to collate and compare evidence and learnings on previous approaches in addition to generating future policy options. **Health economics research** can also provide important data and considerations to inform policy and implementation.

Again, use of **standard indicators** will enable data from different interventional studies to be compared and synthesised, and the use of a broad range of social and health outcome measures will help to create a more holistic picture of the impact of interventions. However, locally specific indicators may also be essential, to capture information on important context-specific factors.

Participants argued that **primary healthcare** systems were central to UHC and delivery of care to underserved populations, emphasising the importance of **health systems research** to identify and evaluate equitable models of care delivery. It was stressed that communities should be intimately involved in the design of new models of care to ensure that they meet population needs and preferences.

Delegates also argued that research activities needed to **extend beyond the health domain**. Given the range of social factors affecting the health of disadvantaged communities, solutions will likely need to involve additional areas of social support. In addition, there is a need to consider how some vulnerable groups, such as undocumented migrants, are treated by other agencies, such as security forces, which could affect their willingness to access care services.

It was also argued that researchers should consider the intersection between health inequalities and **health security**. Inadequate access to care promotes the transmission of infectious diseases, with potential implications for the spread of infection both within and between countries.

Participants also noted that research into health inequalities should also consider the principle of **proportionate universalism**, whereby the intensity of the intervention to address a health need reflects the extent of that need. Particularly disadvantaged and marginalised populations often lie at the extreme end of a spectrum, but some attention should also be given to those experiencing less extreme disadvantage and health inequalities.



### Preparing for the next crisis...

**Pandemic/emergency preparedness:** *Anticipating the next pandemic/health crisis.*

Many countries had existing **pandemic response plans**, which were activated when COVID-19 was detected. Nevertheless, countries with supposedly high levels of preparedness did not necessarily respond particularly effectively to the COVID-19 pandemic. Health systems were often stretched to breaking point or beyond, many testing systems proved inadequate, and countries struggled to obtain sufficient personal protective equipment.

Delegates recognised the need to carry out research into national responses to the COVID-19 pandemic and to learn lessons to inform the development of future plans for emergency responses, including pandemics. This preparedness will need to be sufficiently flexible to cope with other health emergencies, including those linked to climate change.

It was suggested that research could focus on the potential of **'embedded preparedness'** within health systems, so that preparedness becomes part of the lived experience of such systems rather than an abstract plan.<sup>13</sup> This preparedness will also need to consider how best to move staff around health systems within countries and across medical specialities, to create a more agile and flexible health workforce without sacrificing quality and safety. It was suggested that frontline healthcare workers should be intimately involved in the development of pandemic preparedness plans, and research protocols to be activated in the events of pandemics, as they will be the ones ultimately charged with implementing them. The need for such an approach is not exclusive for pandemics, for example it is also needed for climate preparedness and in the situation of other health emergencies.

Furthermore, there are now opportunities to review preparedness plans with an **equity lens**, to ensure that future strategies explicitly consider the potential for inequities in responses and mitigate the risk of exacerbating inequalities. It will also be important to pay more attention to the secondary effects of pandemic responses, including impacts on other healthcare services and the effects of public health and social control measures, which may have differential impacts on certain populations. Research into how the COVID-19 pandemic, and responses to it, affected other health services will help to identify the long-term consequences for health inequalities of this 'collateral damage', and inform the development of more integrated future responses.

An important aspect of pandemic preparedness is **surveillance** for known and emerging infections. Countries vary significantly in their surveillance capabilities, but the COVID-19 pandemic has seen rapid expansion of testing capacity in many low- and middle-income countries (LMICs). Pathogen genome sequencing is of growing importance in such surveillance and further national capacity building in this area is required, expanding efforts triggered by the COVID-19 pandemic.

Within countries, it is essential that surveillance covers all populations equitably, which presents a significant challenge for countries with hard-to-reach remote rural populations, migratory populations or regions affected by conflict. Strong community engagement will be required to embed community-based surveillance. There is a need for integrated systems, efficient reporting mechanisms, and strategies for regional and global data sharing. There is the potential for greater collaboration between government and academic institutions in this area.

13. Anesi GL, Lynch Y, Evans L. A Conceptual and Adaptable Approach to Hospital Preparedness for Acute Surge Events Due to Emerging Infectious Diseases. *Crit Care Explor.* 2020;2(4):e0110. doi: 10.1097/CCE.000000000000110.





### Collaborating to achieve more...

**Interdisciplinary responses:** *Working together to advance the research agenda.*

Participants noted that adopting the approaches discussed above would require an **interdisciplinary approach**, with an integrated strategy incorporating researchers with expertise in medical, social, epidemiological, economic, demographic, ethics and other domains, and with interests in areas such as equity, gender and race.

Such research partnerships will be necessary to gain a holistic picture of the disadvantages faced by certain communities and their impact across multiple domains, to ensure that strong relationships are built with communities, and to support the development of integrated interventions spanning key social and health needs. It was suggested that research partnerships need to extend beyond organisational boundaries and well-established teams, bringing in new organisations and areas of expertise and encouraging the forging of new relationships.

The importance of working closely with **policymakers** was emphasised, to ensure that the data gathered is of relevance to decision-makers and that interventions have the potential to be implementable and sustainable.

Collaboration also needs to extend beyond national borders. Issues related to insecurity and migratory or displaced populations, for example, generally affect more than one country. In addition, challenges may be sufficiently similar in neighbouring countries enabling regional approaches. Participants called upon funders to consider increasing their support for health systems research projects at the regional and national level in LMICs in order to accelerate UHC and address health inequalities.

Participants also noted significant **power imbalances** in research. Researchers in LMICs typically have less access to research funds and are sometimes seen as 'junior partners' in collaborative research projects. It was argued that funders and principal investigators from high-income countries should commit to equitable research partnerships. However, it was equally noted that LMIC governments should also make greater commitments to research rather than relying on funding from high-income sources.

Delegates also stressed the importance of developing research plans that aligned with existing global frameworks, including the UN Research Roadmap and the UNESCO Recommendation on Open Science.<sup>14</sup>

14. <https://en.unesco.org/science-sustainable-future/open-science/recommendation>

# Conclusions

---

**The COVID-19 pandemic has brought health inequalities to wider attention. It has shone a light on systemic failings that have led to poor health outcomes across a wide range of indicators among disadvantaged and marginalised populations for many years. These failings are typically complex and highly dependent on local contexts, and typically reflect wider social disadvantages faced by certain groups..**

The COVID-19 pandemic has been seen as a **'teachable moment'**, when profound shocks to existing systems, and experimentation with novel approaches required because of exceptional circumstances, can create opportunities for significant change. Tackling health inequalities with renewed vigour could be one such response.

This will require a comprehensive understanding of existing health inequalities and the additional impact of the COVID-19 pandemic on them, and a rigorous assessment of interventions to address health inequalities through strengthened UHC. The research community therefore has a critical role to play in generating the evidence to ensure that future health gains are shared more equitably in the post-pandemic era.

For research to play its part, significant **capacity building** will be required. This needs to encompass human research capacity across all domains and for cross-disciplinary collaboration, the infrastructure necessary for high-quality research (including data systems), and capacity for translational activities such as effective engagement with policymakers.

Although each country faces its own unique challenges, there is much to be gained from cross-national dialogue and sharing of experience and evidence. Some settings are sufficiently similar that lessons from one country are of direct relevance to another, raising the possibility of coordinated regional studies. The framework summarised above provides a foundation for systematic and coordinated analysis of health inequalities and development of interventions, to ensure consistency in approaches and to optimise mutual learning.

This framework could also be of value to other stakeholders, including policymakers and funders. For example, it could help funders prioritise areas for support, generate more specific research questions, and identify the kind of research studies they could envisage supporting. Notably, the workshops have highlighted the potential value of international comparisons and collaboration, raising the prospect of comparative studies spanning high-, low- and middle-income settings. COVID-19-related research has demonstrated the value of such comparisons, for example on waning protection following vaccination in different settings.<sup>15</sup>

Countries worldwide have pledged their commitment to UHC. Health inequalities are a vivid illustration of a failure to achieve UHC, with marginalised and disadvantaged populations frequently left behind. Research has a key role to play in ensuring that healthcare systems deliver quality care to all, whatever their circumstances.

15. Katikireddi SV, Cerqueira-Silva T, Vasileiou E et al. Two-dose ChAdOx1 nCoV-19 vaccine protection against COVID-19 hospital admissions and deaths over time: a retrospective, population-based cohort study in Scotland and Brazil. *Lancet*. 2022;399(10319):25-35. doi: 10.1016/S0140-6736(21)02754-9.

# Appendix 1: Workshop steering committee

## Co-chairs:

**Professor Catherine Law FMedSci** University College London, UK

**Professor Rajae El Aouad** University for a New Africa, Morocco

## Committee:

**Dr Jorge Neira** National Academy of Medicine, Argentina

**Professor Sonny Kuku** Nigerian Academy of Science

**Acad. Dr Carmencita Padilla** University of the Philippines Manila

**Dr Mary E. Ashinyo** Ghana Health Service

**Dr Suraj Bhattarai** Global Young Academy, Nepal

**Professor Beate Kampmann** London School of Hygiene and Tropical Medicine, UK

**Professor Shakila Thangaratinam** University of Birmingham, UK

**Dr Vittal Katikireddi** University of Glasgow, UK

**Dr Steven Hoffman** York University, Canada

## Appendix 2: Participant list

**Professor George Anesi**

University of Pennsylvania Perelman School of Medicine, USA

**Professor Richard Catlow**

Inter Academy Partnership

**Professor Tom Solomon FMedSci**

The Academy of Medical Sciences, UK

**Professor Giuseppe Costa**

Turin University Medical School, Italy

**Dr Winifred Ekezie**

University of Leicester, UK

**Dr Meenakshi Gautham**

London School of Hygiene and Tropical Medicine, UK

**Dr Damitha Asanga Gunawardane**

University of Peradeniya, Sri Lanka

**Professor Susan Horton**

University of Waterloo, Canada

**Tafadzwa Kadye**

Department of Health and Social Care, UK

**Kekeletso Kao**

FIND, the global alliance for diagnostics, Switzerland

**Professor Helena Legido-Quigley**

NUS Saw Swee Hock School of Public Health, Singapore

**Dr Lei Lei Swe**

Shoklo Malaria Research Centre Unit, Thailand

**Dr Angkana Lekagul**

International Health Policy Program, Thailand

**Professor Depei Liu**

InterAcademy Partnership

**Prof Lai-Meng Looi**

University of Malaya, Malaysia

**Dr Luis Alberto Martinez-Juarez**

London School of Hygiene and Tropical Medicine & Fundación Carlos Slim, UK/ Mexico

**Prof Rose McGready FMedSci**

Shoklo Malaria Research Centre, University of Oxford, Thailand/UK

**Dr Atiya Mosam**

Independent Public Health Medicine Specialist, South Africa

**Dr Julio Muñoz Miguel**

Hospital de Sagunto, Spain

**NkasiObim Nebo**

PeachAid Medical Initiative, Nigeria

**Professor Ellen Nolte**

London School of Hygiene & Tropical Medicine, UK

**Professor J. Olufemi Ogunbiyi**

University of Ibadan/University College Hospital, Nigeria

**Professor Obinna Onwujekwe**

University of Nigeria

**Alejandra Paniagua-Avila**

Columbia University, USA/ Guatemala

**Dr Raymond Sarmiento**

University of the Philippines Manila

**Dr Thitiporn Sukaew**

International Health Policy Program, Thailand

**Dr Bach Tran**

Hanoi Medical University, Vietnam

**Dr Fonthip Watcharaporn**

Institute for Urban Disease Control and Prevention (IUDC), Thailand

**Dr Deena Alasfoor**

World Health Organisation, Egypt

**Dr Mondher Letaief**

World Health Organisation, Tunisia

**Professor Rosanna Peeling**

Professor and Chair of Diagnostics Research at the London School of Hygiene and Tropical Medicine (LSHTM)

**Professor Flavia Senkubuge**

University of Pretoria, South Africa

**Dr Tanya Blumenfeld**

GP, researcher, and medical student tutor (University of Cambridge, University of Essex)

**Eva Spiritus-Beerden**

Ghent University, Belgium

**Taco Jan Prins**

Shoklo Malaria Research Unit, Thailand

**Dr Caroline Harris**

Medical Research Council, UK

**Dr Tonia Rifaey**

World Health Organisation, Egypt

**Professor Ilse Derluyn**

Ghent University, Belgium

**Professor Krishna Rao**

John Hopkins University, USA

**Professor Mohammad Abu- Zaineh**

Aix-Marseille University, France

**Dr Najibullah Safi**

World Health Organisation, Afghanistan

**Dr Ranieri Guerra**

Accademia Nazionale di Medicina, Italy

**Dr Simon Ducarroz**

French Institute of Health and Medical Research

**Professor David Cantor**

University of London, UK

**Dr Emma Martinez**

Federation of European Academies of Medicine

**Dr Benjamin Djoudalbaye**

Africa CDC

**Secretariat:****Fern Brookes**

International Policy Manager,  
Academy of Medical Sciences

**Sabina Caris**

Programme Assistant, InterAcademy Partnership

**Alex Hulme**

Head of International Policy,  
Academy of Medical Sciences

**Ania Kordala**

Policy Intern, Academy of Medical Sciences

**Daniela Toale**

COVID circle-UKCDR

**Dr Jina Swartz**

Health in Internal Displacement Network

**Jill Jones**

UKRI MRC

**Dr Luis Augusto Galvão**

Sustainable Health Equity Movement

**Professor Oyewale Tomori**

Global Virome Project Leadership Board, Nigeria

**Professor Norbert Hounkonnou**

The Network of African Science Academies

**Alyssa Chase-Vilchez**

Global Alliance for Chronic Diseases

**Fatuma Achieng**

The Network of African Science Academies

**Professor Awang Bulgiba Awang Mahmud**

Academy of Sciences Malaysia

**Dr Jurairat Phromjai**

Health Systems Research Institute (HSRI), Thailand

**Dr Charay Vichathai**

Health Systems Research Institute (HSRI), Thailand

**Martin Gadsden**

The Japan Agency for Medical Research and  
Development

**Aisha Mazhar**

Policy Officer, Academy of Medical Sciences

**Dr Peter McGrath**

Coordinator, InterAcademy Partnership

**Giovanni Ortolani**

Communication Assistant,  
InterAcademy partnership

**Claudia Roses-Novella**

Policy Intern, Academy of Medical Sciences



Academy of Medical Sciences  
41 Portland Place  
London W1B 1QH

 @acmedsci

+44 (0)20 3141 3200  
info@acmedsci.ac.uk  
www.acmedsci.ac.uk

Registered Charity No. 1185329  
Incorporated by Royal Charter.  
Registration No. RC000905



InterAcademy Partnership  
ICTP Campus, c/o TWAS  
Strada Costiera 11  
34151 Trieste, Italy

 @IAPartnership

iap@twas.org  
www.interacademies.org