

Evaluation of the National Institute for Health and Care Research's (NIHR) Global Health Research (GHR) Portfolio, First Phase (2016/17-2020/21)

Evaluation Summary Brief

1.0 Background to the NIHR GHR Portfolio

There has been a growing effort across the global health research community to build applied research and innovation capacity in low- and middle-income countries (LMICs), nurture and develop research talent, and maximise research impact to address health challenges specifically faced by LMICs. To complement efforts from existing Overseas Development Aid (ODA) research programmes following the 2015 UK Aid Strategy, the Department for Health and Social Care (DHSC) and the National Institute for Health and Care Research (NIHR) established the Global Health Research (GHR) Portfolio in 2016 to support applied health research and training in LMICs, to address unmet needs and strengthen research capabilities.

By the end of the first phase (2016/17-20/21), the GHR Portfolio had evolved to include 30 distinct programmes which funded awards for individual researchers or consortia of researchers and institutions in LMICs and the UK. Some programmes are directly managed by NIHR and some are managed by Partners. This included a range of initiatives focused on career development, training and research opportunities which complement the capacity-strengthening objectives that are embedded as a key principle across all programmes. Further, NIHR's strong emphasis on community engagement and inclusion (CEI) and equitable partnerships as core principles of funding has been instrumental in encouraging greater engagement with these approaches among award holders who applied for research funding.

The GHR Portfolio's Theory of Change (ToC) (see Figure 1) outlines the NIHR's ambition to improve global health outcomes. The ToC is presented in the form of a flow diagram that links inputs, activities, outputs, outcomes and impacts. It reflects the reality that it may take 3 to 10 years for research outputs to influence policy, practice, and behaviour changes and 10-25 years for these changes to lead to strengthened health systems and increased capacity for health promotion and disease prevention.

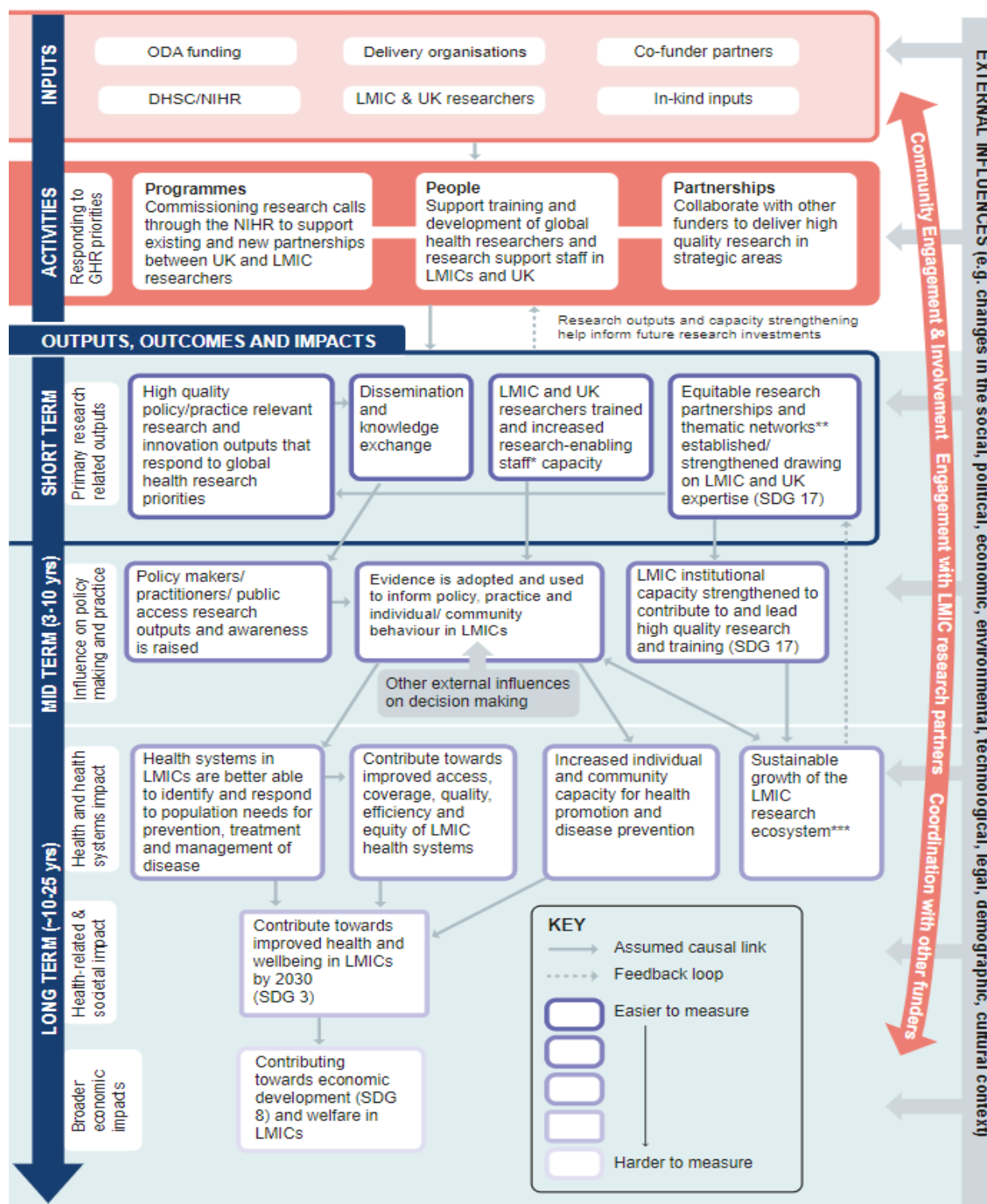
2.0 The Evaluation

The DHSC commissioned Ecorys in December 2021 to undertake an evaluation of NIHR GHR's first phase. The evaluation was delivered in four stages: *inception*, *interim evaluation*, *final evaluation* and a *dissemination phase*. It used a theory-based approach to assess the contributions of the GHR Portfolio to the intended outputs, outcomes, and likely impact of investments, including whether work was on track to deliver the expected results given the long-term nature of the anticipated research impact. The evaluation process involved testing the GHR Portfolio's ToC, including its assumptions and causal links, to determine the validity of the underlying theory using a contribution analysis¹ (CA) approach.

¹ The CA method allowed for a systematic assessment of the GHR Portfolio outputs and their potential contribution to the GHR Portfolio's expected outcomes, as reflected in the ToC. This method uses qualitative data from programme and award level interviews, document reviews, and the survey analysis as evidence for analysis. A CA matrix was developed to map ToC outputs against its outcomes and including an assessment of the strength of evidence and plausibility of contribution.

The key methods comprised a document and data review of GHR Portfolio, programme and award documentation; interviews with stakeholders at GHR Portfolio, programme and award levels; and an online survey disseminated to all funded awards. Social Network Analysis (SNA) was conducted to assess networks and interactions between funded institutions, as well as Bibliometric Analysis (BA) to examine research outputs and collaboration. A purposive sampling approach to programmes and awards for in-depth review provided rich learning and insights at both portfolio and award levels.

Figure 1: NIHR GHR Theory of Change



3.0 Findings

The evaluation questions were organised around the Organisation for Economic Co-operation and Development's Development Assistance Committee (OECD-DAC) evaluation criteria: *Relevance, Coherence, Effectiveness, Efficiency, Adaptability and Learning, Impact and Sustainability*. The evaluation also included questions related to *Adaptability and Learning, CEI, and Value for Money (VfM)*. Overall findings from the evaluation are presented below.

3.1 Overall findings by evaluation questions

Relevance: To what extent is the GHR Portfolio addressing priority areas of health research in LMICs where there are unmet needs identified by government and/or civil society in the relevant countries?

The GHR Portfolio has been successful in ensuring that its investments address priority areas in health research within LMICs. The portfolio rapidly evolved from an initial focus on non-communicable diseases to wider research in infectious disease, including in support of COVID-19 response. This has been facilitated through valuable partnerships that supported investment in a range of themes and geographies. Health inequalities were given priority, and efforts were made to understand the underlying causes of these disparities. Unmet needs were identified through consultations with UK and international partners experienced in global health research and through calls for researchers from UK and LMIC Higher Education Institutions or Research Institutes, who understood neglected thematic areas. In some programmes, a researcher-led approach facilitated this.

Researchers and LMIC country stakeholders were consulted during the design and development of the portfolio, and NIHR plan to enhance engagement to further promote sustainability and impact, particularly in addressing gender, equity, and ethical considerations. The involvement of government, policy makers and civil society actors representing marginalised populations increased over time, particularly where researchers have obtained subsequent awards to continue and expand their research. NIHR's ongoing efforts to fund more LMIC-led research partnerships demonstrate further potential for supporting local priorities and embedding research in local systems.

Coherence: To what extent is the GHR Portfolio a coherent funding mechanism to meet its stated outcomes?

Given the scale of unmet health needs in LMICs, internal and external coherence is crucial for optimising the GHR Portfolio's impact on improving health in LMICs. DHSC has successfully designed the GHR Portfolio so that it complements existing government research funding mechanisms, as well as other UK and global health funders. DHSC and NIHR have successfully coordinated and collaborated externally with other UK, partner country and global health research initiatives. At portfolio level, proactive and ongoing engagement with other UK funders has helped strengthen and facilitate strategic collaboration and operational coherence across key ODA partners.

NIHR has increased thematic and operational complementarity between NIHR-led and Partner-led programmes over time, with many programmes aligned with DHSC's results framework to harmonise reporting. Efforts to increase internal harmonisation between programmes and approaches have strengthened over time.

The GHR network has successfully and actively established global health collaborations with a wide range of institutions within the global health research community, including many LMIC institutions and other key stakeholders in global, regional, national and local contexts. Within this, there are large communities of institutions within the overall GHR network, presenting strong opportunities for collaboration and the exchange / dissemination of knowledge in NIHR-led programmes, in particular. The stronger, smaller, and concentrated number of community groups among NIHR-led awards indicates that institutions funded directly by NIHR may be more closely

related in research interests, expertise, or geographic proximity, and have better opportunities for cross-collaboration and knowledge exchange within the NIHR portfolio.

Effectiveness: How effective has the GHR Portfolio been in achieving its intended results?

The GHR Portfolio has funded programmes and awards that have made significant progress in producing high-quality, policy-relevant research outputs, expanding research capacity, and establishing equitable partnerships, and promoting CEI. During the first phase, it delivered 3,494 publications with a notable citation count (86,161). There is strong evidence of the GHR Portfolio's success in individual research capacity strengthening, including supporting the career progression of researchers. Strengthening the capacity and career development of female researchers is progressing, as is the development of institutional capacity among LMIC research partner institutions. However, evidence of system-level capacity changes is more limited at this stage.

The GHR Portfolio has made good progress in promoting equitable partnerships. While the majority of institutions in the GHR Portfolio are from LMICs, UK institutions tend to dominate in terms of their importance, influence, ability to connect with other influential actors, and play a significant role in connecting other institutions to NIHR or partner funding. Due to challenges that remain in relation to power dynamics within partnerships and the wider health research funding landscape, addressing barriers to equitable participation of LMIC researchers is a complex task beyond the scope of individual awards.

CEI is a core commitment for NIHR, with effective examples at the award level. There is scope and interest within NIHR to increase understanding of how communities experience CEI initiatives with a deeper focus on gender and marginalised groups. Effective initiatives involve funding researchers embedded in communities and health systems, with successful models incorporating centres of excellence to build local and regional capacity through collaboration.

Efficiency: Has the GHR Portfolio and its delivery partners been able to convert inputs into outputs in a timely and effective way?

The GHR Portfolio is developing a VfM framework. The evaluation focused on qualitative evidence to assess the extent to which operational structures and processes support timely and effective delivery. The findings indicate that overall, structures and processes facilitated by DHSC and partners, have successfully delivered outputs despite challenges posed by the COVID-19 pandemic.

Leveraging partners' expertise in LMICs, within awards, and involving key stakeholders (including policymakers and communities) early in the research process enhanced operational effectiveness and efficiency. Delivery partners' relationships, expertise, and systems in global health research funding overall benefitted the GHR Portfolio. Further efficiency and continuous improvement of approaches would be facilitated by enhancing DHSC staff's LMIC in-country experience and increasing resources for public engagement, knowledge exchange, and dissemination. Approaches to developing and monitoring CEI and equitable partnerships efforts at the award level could also be enhanced, as well as increased mechanisms for feedback loops for LMIC award holders on management practices.

Adaptability and learning: How well is the GHR Portfolio adapting and embedding learning?

NIHR's approach to iterative learning has been beneficial in adapting the GHR Portfolio to the need for rapid allocation of funding during Phase 1, as well as to the unique challenges posed by the COVID-19 pandemic and operational delays. It allowed for flexibility, as evidenced by the number of awards granted increased time (no cost extensions) for delivery. Thematic learning on specific health topics and undertaking research in different contexts/settings from across programmes and awards was more limited, and there is variation in learning practices within programmes.

Monitoring, evaluation and learning (MEL) at the Portfolio level has developed over time, with an increase in coverage of Annual Reviews, Programme Completion Reviews and After Action Reviews along with improved systems for data collation and sharing during Phase 1. Further resources dedicated to MEL would support a more comprehensive, strategic approach to measuring outcome level results.

Impact: Is there any early evidence that funded research and capacity-strengthening activities are on track to/have the potential to contribute towards 3-10 year anticipated impacts?

The impacts of the GHR Portfolio outlined in the ToC are expected to be observed from 10-25 years from the start of the funding in 2016/17. At this stage, the Portfolio has contributed to medium-term outputs and outcomes in line with the desired pathways of change. Most assumptions about how activities will support longer term global health outcomes are holding, with the enabling factors of follow-on funding and LMIC award leadership requiring monitoring and potentially mitigation.

The GHR Portfolio's research and capacity-strengthening activities to date demonstrate the potential to influence health policy and practice and strengthen health systems in LMICs, especially where research agendas are sustained. There are early signs that where awards are at a more mature stage, they have begun to successfully raise awareness of research topics and influence access to research findings among policy makers, practitioners, and the public in LMICs. Success is attributed to building networks and structures for meaningful engagement with stakeholders. The GHR Portfolio has taken steps to address important considerations for creating an environment for influencing policy and practice, such as CEI, equitable partnerships, and coordination with other stakeholders. A Portfolio-wide approach and systematic approach to developing these activities and monitoring performance in these areas would support longer-term impacts.

Sustainability: To what extent will the net benefits of the GHR Portfolio continue, or likely continue, beyond the funded period?

There are examples at both the programme and award levels that showcase research impact and gains in individual capacity strengthening, and in turn their contributions to wider health systems that have the potential to be sustained beyond the funding period. Linkages and partnerships supported through award funding contribute to sustainability by enabling further collaboration and funding opportunities. However, issues with availability of subsequent implementation funding for continuing and expanding the research funded by NIHR GHR undermine the potential for long-term gains, as first awards often only address initial research needs. Due to the early stage of the GHR Portfolio and the long timescale required for sustainability effects to materialise, data and insights on sustainable net benefits are also limited although there are positive signs of progress towards this being achieved.

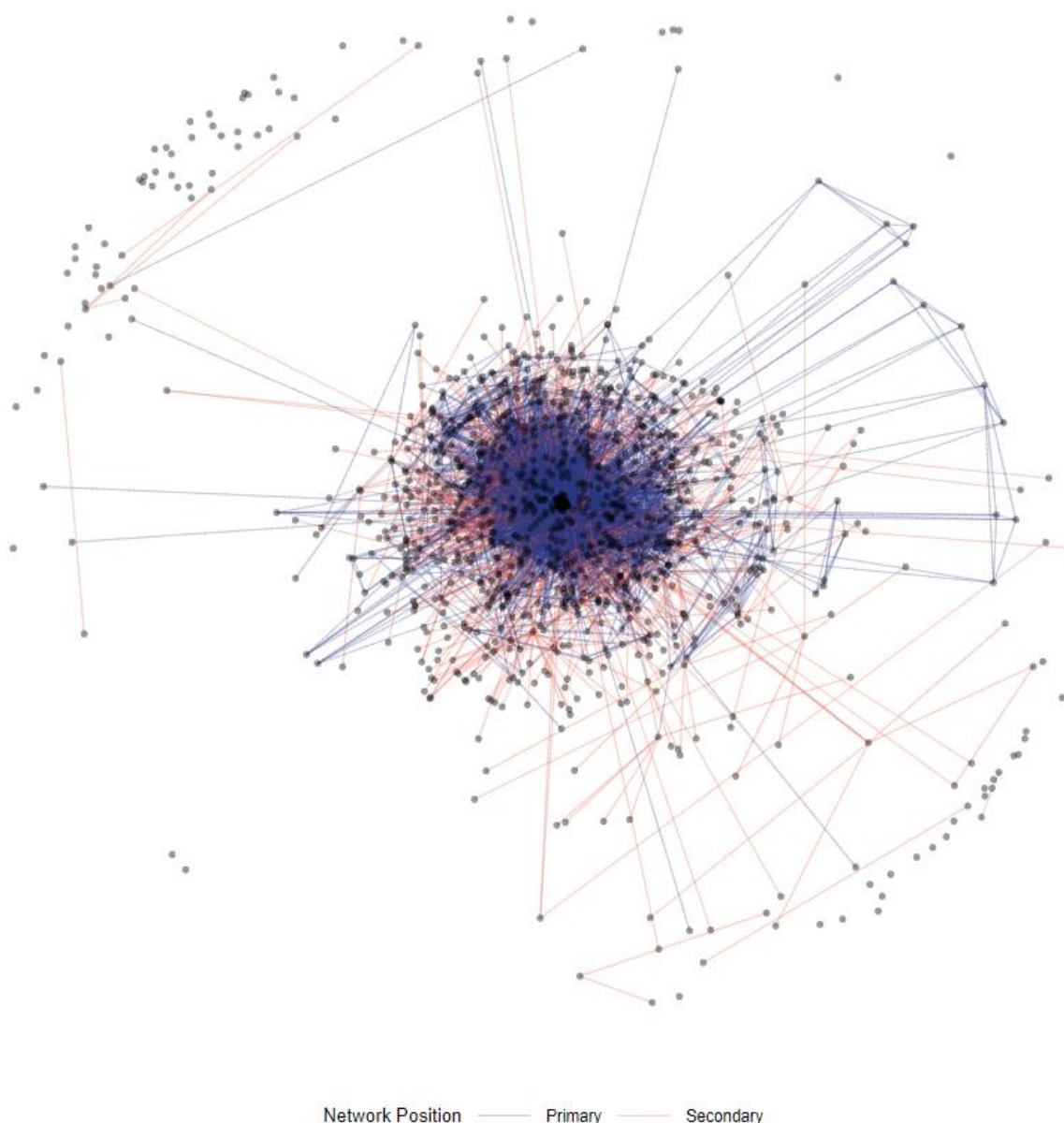
3.2 Social Network Analysis (SNA)

The evaluation used SNA to supplement the evaluation questions on aspects related to the effectiveness of networks funded by the GHR Portfolio, whether there is coherence with other health research funders, and the approaches that the networks use to disseminate evidence and improve their accessibility. The SNA provides supporting evidence most notably against *Coherence* (the extent to which effective partnerships are formed or expanded through research funded by the GHR Portfolio) and *Effectiveness* (the extent to which opportunities for knowledge exchange are likely to be created). Findings from the SNA are presented below.

The GHR network, representing the reach of NIHR funding as per available data, shows that NIHR and its partners have reached 1,158 institutions from 108 countries, with 72% of institutions in the GHR Portfolio network from

LMICs compared to 28% of non-LMIC institutions². When considering the primary network funded directly by NIHR and its partners through awards, it has reached 770 institutions. The most commonly represented countries of institutions in the GHR Portfolio network include the United Kingdom (11%), followed by Kenya (6%), India (6%), Uganda (5%), Nigeria (4%) and the United States (4%). While the majority of institutions in the GHR Portfolio network are from LMICs (72%), evidence suggests that UK institutions tend to dominate in their importance, influence, ability to connect with other influential actors, and play a significant role in connecting other institutions to NIHR or partner funding.³ Figure 2 provides a visual representation of connections between institutions within the portfolio network.

Figure 2. GHR Portfolio network by primary and secondary connections



² This considers both primary and secondary networks identified using available data.

³ Centrality metrics, including degree, betweenness and eigenvector centrality, were triangulated to produce this finding.

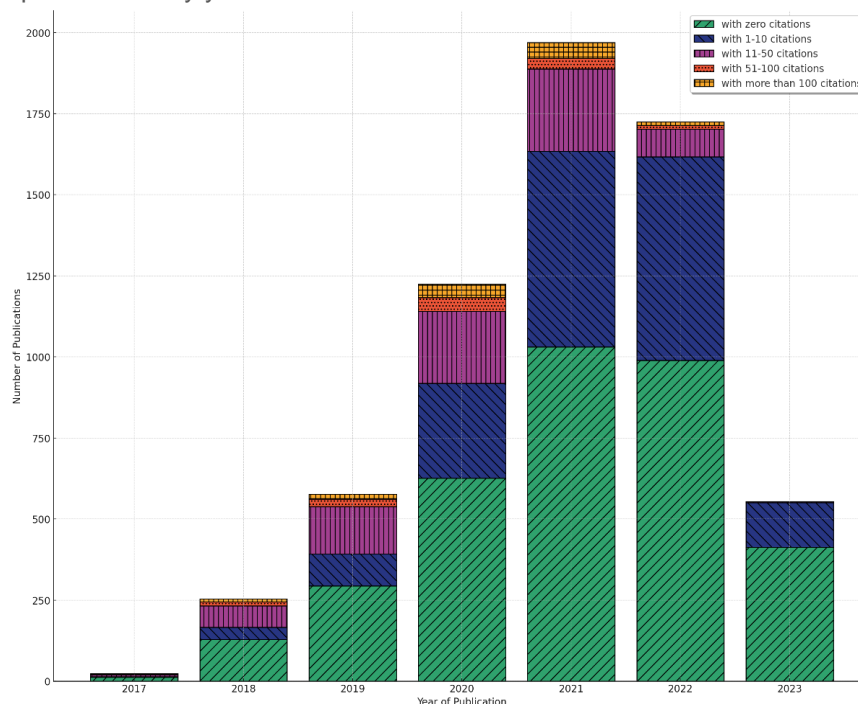
3.3 Bibliometric Analysis

The evaluation conducted a BA as part of the final evaluation phase to explore the reach and impact of NIHR-funded research, including publications and other research outputs. The BA supported a key component of the evaluation's assessment of the portfolio's *Effectiveness*, exploring the scientific importance and policy relevance of research outputs through performance metrics and citation analysis, as well as insights into equitable partnerships through co-authorship analysis. The evaluation identified 3,494 publications relevant to the GHR Portfolio since 2017 which formed the sample for the analysis. Findings from the BA are presented below.

The evaluation found that Articles (89%) are the most common publication type, with medRxiv, BMJ Open, and others being top journals in which publications are published. Publications are typically supported by 3-4 funders. The NIHR and DHSC are leading funders of these publications, often in combination. A significant portion of the portfolio's research (54%) is Gold Open Access⁴. Publications' citation counts appear to be relatively uninfluenced depending on whether they are more or less open access (see **Error! Reference source not found.**). The majority of citations are associated with organisations in high income and upper middle-income countries. This includes the United Kingdom, United States, Brazil, and South Africa, among others. There are only a few low and middle-income countries in the Top 30 countries, including India, Uganda, Nigeria, Pakistan and Tanzania.

The portfolio's publications cover a wide range of thematic areas, with notable focus on Infection (most common health category), organisation and delivery of services. There is significant alignment with Sustainable Development Goals, especially SDG 3: Good Health and Wellbeing. There was a significant growth in publications, especially during the COVID-19 pandemic, which have garnered substantial citations, with some articles being exceptionally influential. Research involves a vast number of authors, with a median of 9 authors per publication. In terms of Global South Participation in co-authorship, the UK has a dominant presence in first and last authorship.

Figure 3. Number of publications by year



⁴ Gold open access are articles in which the publisher makes all articles and related content available for free immediately on the journal's website, under a creative commons or similar license. An Article Processing Charge (APC) is usually paid by the author (or other funder). Hybrid open access is a subscription journal where the publisher allows authors to pay to make individual articles open access.

4.0 Conclusions and Recommendations

The NIHR GHR Portfolio has successfully delivered research activities and established itself as a respected and significant player in the GHR space in the UK and the international community. The GHR Portfolio activities have responded to priority needs of health research in LMICs, built the research capacity of individuals and institutions in the UK and LMICs, fostered equitable partnerships, and raised the visibility of community engagement as an integral part of global health research. Our assessment found progress with the GHR Portfolio's longer-term expected contributions to changes in policy and practice, strengthened health systems and improved health outcomes. Recommendations emerging from this evaluation are designed to inform future phases of the portfolio. The recommendations were co-produced with the DHSC and NIHR to support appropriateness and feasibility of implementation.

The conclusions and recommendations are as follows:

1. **The GHR Portfolio's programmes are responding to priority and underfunded health research areas in LMICs.** By working with a diverse range of partners, the portfolio was able to mobilise and grow quickly and support a wide range of themes and geographic areas. The portfolio is thematically much broader than initially envisaged and a more focused approach with greater collaboration within and across programmes in the GHR Portfolio and beyond would offer greater potential to leverage synergies and support impact.

Recommendation 1: Focusing the future strategic direction. NIHR should continue to evolve the GHR strategy and decide if there is a need for a more focused approach, such as potentially focusing on fewer themes, countries, and LMIC institutes where substantial progress has been made. This should be agreed in consultation with key funding partners globally, with emphasis on the most mutually beneficial funding partnerships and ensuring ongoing complementarity.

2. **The GHR Portfolio has resulted in a high volume of peer-reviewed research publications and many associated outputs aimed at driving policy and practice change on the ground in health service provision.** The degree and quality of engagement with LMIC researchers and other LMIC stakeholders in this process has been steadily increasing and could be further improved and oriented towards preparing the ground for wider policy uptake and changes in health practice.

Recommendation 2: Promoting policy uptake. NIHR should consider strengthening mechanisms in the research design phase to ensure the policy uptake environment is generally positive, ensuring the right stakeholders are involved in design, and outputs are likely to be acceptable, feasible and affordable to scale up. NIHR should also provide more direct support for policy-relevant outputs and communications to support policy uptake, potentially with a specialised external agency

3. **Some award holders are engaging with representatives of poor and underserved communities.** It is crucial for this practice to be embedded to ensure that supported research is aligned with needs, including those with the highest burden of disease. There is a need for improved guidance on ethical considerations, as well as NIHR's expectations on promoting health equity.

Recommendation 3: Guiding research in underserved communities. NIHR should develop specific guidance around the ethical considerations of conducting research in poor and underserved communities. The guidance should support learning on understanding and responding to health inequalities, communicating research to communities, and ensuring that research does no harm and meaningfully benefits communities participating in research.

4. **The GHR Portfolio is delivering high-quality research, strengthening research capacity and making progress towards equitable research partnerships. Our contribution analysis assessment also found evidence of the GHR Portfolio's contribution to longer term outcomes including improved policy and practice.** Improvements in GHR Portfolio level MEL capacity and systems would support the ability to track overall portfolio progress.

Recommendation 4: Strengthening GHR Portfolio level MEL. NIHR should refresh and strengthen its MEL strategy and framework to align with the current (or a revised) ToC and establish stronger systems and processes for tracking and using the results of all GHR Portfolio investments. NIHR should support awards to monitor, better understand and learn from the extent to which their equitable partnerships, CEI and RCS approaches are supporting changes. This will require additional technical expertise and resource.

5. **There is significant learning from the first phase, which has supported adaptation including during COVID-19.** There are opportunities for the commitment to learning to be formalised to support systematic learning for and from award holders and programme leads across the GHR Portfolio.

Recommendation 5: Investing in strategic learning and knowledge exchange. NIHR should invest more in opportunities for strategic learning, in-person networking, and knowledge exchange to enhance research impact and capacity strengthening, and further embed the CEI and equitable partnerships approaches.

6. **The NIHR is strongly committed to promoting LMIC leadership of global health research through its emphasis on equitable partnerships, CEI and RCS.** This is resulting in more streamlined and strategic approaches that have influenced other funding partners, supported progressively well-developed approaches at the award level, and incorporated learning from LMIC experience. However, contextual analysis of research-policy linkages, the research ecosystem, and gendered and social inequalities, norms and power dynamics is not yet routine or consistent.

Recommendation 6: Emphasising contextual analysis. NIHR should update its guidance to awards to reflect the need for meaningfully integrating contextual analysis on research-policy linkages, research ecosystems, and gendered and social inequalities into the conceptualisation, design, implementation and monitoring of their studies, including their policy uptake, equitable partnering, CEI and RCS approaches.

Recommendation 7: Building deeper understanding of CEI approaches. NIHR should encourage and support awards to integrate CEI more strategically across the research cycle - including across their contextual analysis, monitoring and learning, and sustainability approaches - to better understand emerging pathways of change and good and promising practice. NIHR could also explore possibilities for providing technical support to awards, and funding research explicitly focused on CEI.

7. **The approach to the GHR Portfolio has fostered collaboration and progress on equitable partnerships.** However, further action to address barriers to equitable participation for LMIC partners would strengthen the approach.

Recommendation 8: Supporting LMIC research partners. NIHR should provide further support to LMIC research partners to overcome operational challenges and build management capacity by simplifying application and financial reporting processes, providing mentoring support, and considering additional funding for wider research implementation aspects.

8. **NIHR scrutinises research applications for potential VfM but the framework for VfM is being developed.**

Recommendation 9: Developing a VfM framework. NIHR should continue to develop an overarching VfM framework and guidance for all programmes and awards to track and assess the value created by investments. This could involve adapting existing VfM frameworks used by other UK funders to ensure alignment of ODA resources.

Recommendation 10: Organisational development. The NIHR should ensure that the GHR team has appropriate and sufficient capacity (policy, people, processes and practices) to implement the above recommendations, beginning with a (light touch) organisational capacity review to better understand current technical and operational capacity.