Department of Health & Social Care

GHR Call 2 Groups Annual Review – Year 2

Published October 2021

NIHR Global Health Research Portfolio

Contents

Acronym and Abbreviation Definitions

AF	Atrial fibrillation
AFIDEP	African Institute for Development Policy
AHRC	Arts and Humanities Research Council
BSI	Bloodstream infection
BSR	British Society for Rheumatology
CA	Collaboration agreement
CDC	Centre for Disease Control
CEI	Community engagement and involvement
CERMEL	Centre de Recherches Médicales de Lambaréné, Gabon
CHW	Community health workforce
CICERO	Centre for International Climate and Environmental Research, Norway
CNPq	Conselho Nacional de Desenvolvimento Científico e Tecnológico, Brazil
COMAHS	College of Medicine and Allied Health Sciences, Sierra Leone
COVID-19	Coronavirus disease
CTP	Change to programme
DfID	Department for International Development, UK
DGHS	Directorate General of Health Services
DHSC	Department of Health and Social Care, UK
DRC	Democratic Republic of the Congo
ECR	Early career researcher
ERS	European Respiratory Society
FAF	Financial assurance fund
FCDO	Foreign, Commonwealth and Development Office
FTE	Full time equivalent
GACD	Global Alliance for Chronic Diseases
GBP	Great British Pounds
GCP	Good Clinical Practice
GCRF	Global Challenges Research Fund
GCVR	Glasgow Centre for Virus Research
GFGP	Good Financial Grant Practice
GHR	Global Health Research
GHRU	Global Health Research Unit
GMS	Greater Mekong Subregion
HAP	Household air pollution
HAWCA	Humanitarian Assistance for the Women and Children of Afghanistan
HIC	High income country
HIV	Human immunodeficiency virus
HRCS	Health Research Classification System
HRIDAY	National Heritage City Development and Augmentation Yojana
IATI	International Aid Transparency Initiative
IPCRG	International Primary Care Respiratory Group
IT	Information technology

KCMC	Kilimanjaro Christian Medical College, Tanzania
KEMRI	Kenya Medical Research Institute
KWTRP	KEMRI-Wellcome Trust Research Programme, Kenya
LAM	Lateral flow urine lipoaribomannan assay (test)
LMIC	Low- and middle-income country
LPG	Liquified petroleum gas
LSHTM	London School of Hygiene and Tropical Medicine, UK
MEIRU	Malawi Epidemiology and Intervention Research Unit
MEL	Monitoring, evaluation and learning
MIS	Management information system
MOH	Ministry of Health
MRC	Medical Research Council
MRCG	Medical Research Council Unit The Gambia
NCE	No-cost extension
NETSCC	NIHR Evaluation, Trials and Studies Coordinating Centre
NGO	Non-governmental organisation
NICPR	National Institute of Cancer Prevention and Research, India
NIHR	National Institute for Health Research, UK
NIMH	National Institute of Mental Health, USA
NIMHANS	National Institute of Mental Health and Neuro-Sciences, India
ODA	Official Development Assistance
PI	Principle investigator
PR	Pulmonary rehabilitation
PRICELESS	Priority Cost-Effective Lessons for System Strengthening in South Africa
PTD	Preterm delivery
QSTOX	Quarterly statement of expenditure
RAG	Red/amber/green rating
RCT	Randomised controlled trial
SARS-COV-2	Severe acute respiratory syndrome coronavirus 2
SLACK	Searchable Log of All Communication and Knowledge
SNEHA	Society for Nutrition, Education & Health Action
ST	Smokeless tobacco
TB	Tuberculosis
TIBA	Tackling Infections to Benefit Africa
UCL	University College London
UHC	Universal health coverage
UK	United Kingdom
UVRI	Uganda Virus Research Institute
VAT	Value-added tax
VAW	Violence against women
WGS	Whole genome sequencing
WHO	World Health Organisation
WP	Work package

Annual reporting and review process

This annual review comprises a summary of the Call 1 Groups' performance based on each individual award level annual report return completed as part of a continuous process of review and quality improvement embedded within the National Institute for Health Research (NIHR) Global Health Research (GHR) portfolio. These annual reviews are an opportunity for the Department of Health and Social Care (DHSC) and partners responsible for delivering a funding scheme to reflect critically on the performance and ongoing relevance of awards.

The main sections of the templates have been developed in accordance with cross-funder common reporting practice. Within these common sections, sub-sections have been included to enable us to test our NIHR GHR portfolio Theory of Change using evidence collected in accordance with the NIHR GHR portfolio results framework.

The process for completing this DHSC annual review template involves the following steps:

- DHSC works with delivery partners NIHR Evaluation, Trials and Studies Coordinating Centre (NETSCC) responsible for delivering a funding scheme (NIHR GHR Groups) to ensure that the relevant monitoring information is collected annually through reports at the award level (as set out in the NIHR Global Health Research results framework). This information is collected using existing reporting mechanisms wherever possible, before bespoke reporting is considered.
- Delivery partners (NETSCC) collate an NIHR GHR Groups annual review to synthesize the individual award level monitoring information and present an aggregated funding scheme level report (and award level wherever specified) within this template. Any findings or views on performance should be clearly linked to the evidence base.
- This NIHR GHR Groups annual review is then shared with DHSC for comment and feedback.
- DHSC will then use the delivery partner's annual review and additional information gathered through meetings, field visits and any other documentation to complete their own overarching annual review - relevant sections are highlighted with green boxes. This will include an assessment of overall funding scheme performance over the last 12 months, identify lessons learnt, time-bound recommendations for action consistent with key findings and will be used as an evidence base for future funding decisions.
- Annual review signed off and published.

1. DHSC summary and overview

1.1 Brief description of funding scheme

The second NIHR Global Health Research Groups call launched in 2017. UK universities and research institutes were invited to submit applications to either expand or develop their ambitions to deliver world-class applied global health research, working in equitable partnerships with researchers in low-and middle-income countries (LMICs) to address under-funded or under-researched global health areas specific to those countries.

Specifically, applications were invited for:

- NIHR Global Health Research Groups: Existing specialist academic groups who wished to expand into the field of global health, especially in shortage areas of research. Funding available: Up to £2m over three years per Group.

This report focusses on the activities of the 20 Groups funded in the second year of their three-year contracts over the period 01 April 2019 to 01 May 2020

1.2 Summary of funding scheme performance over the last 12 months (general progress on activities, early outputs, outcomes, impacts across all awards)

NETSCC assessed 17/20 Groups to be largely on track (green or green/amber rating) with their overall delivery, and 3/20 to have an amber risk to their overall delivery due challenges of working in global contexts such as political and environmental challenges and/or delays experienced in the set-up phase. NETSCC will keep financial and overall delivery under close review, and DHSC will monitor this through updates NETSCC provide ahead of monthly Programme Management Meetings (PMMs).

Across the cohort, there is excellent evidence of community engagement and inclusion (CEI) throughout the research cycle. Several Groups reported identifying and including vulnerable groups in their research through community engagement, for example the inclusion of illiterate members of the community in research in Malawi by ensuring activities were communicated verbally, as well as in writing. Communities have been involved in participatory methods including seminars, workshops, meetings, or through media platforms such as TV, radio or social media. In addition, there are clear examples of ownership and empowerment as a result of involving communities in research. One Group reported that as a result of their CEI activities they have identified the cultural adaptations required in Kyrgyzstan to design and deliver Pulmonary Rehabilitation and considerations specific to a post-TB lung disease population. Overall, there is early evidence of how community engagement and input has shaped and influenced research to ensure research is appropriate to local contexts, and therefore more likely to have impact.

In terms of outputs, a total of 17 of the 20 Groups reported having an accepted, pre-publication or published output since the beginning of their programme of work, the most frequently reported being presentations, creative forms of media and journal articles. The cohort reported several educational outputs, the most notable being the creation of education materials for Mumbai police on sensitive handling of cases of violence against women, and a training module developed for the Kenyan Ministry of Health for community health workforce in household air pollution. A total of 33% of authors of externally peer-reviewed publications were nationals from LMICs. It is further encouraging that 50% of total publications had a female lead or senior author.

Many Groups have indicated early outcomes resulting from engagement with practitioners at national and sub-national level. This has included at the national level, the establishment of Tanzania's first rheumatology clinic as a result of a Group's work. Another Group have defined new criteria for confirming a syndromic diagnosis of brain infections in three LMIC settings. At the sub-national level, examples include training and remote support in ultrasound is helping midwifery decision making in real-time; training on a diagnosis technique for severe mental illness is now being used in practice by psychiatrists in Rawalpindi, Pakistan; and workshops on best practices for asthma management, inhaler use, and spirometry have trained 255 healthcare practitioners in three hospitals in Ecuador. As a result, there are some early indications of improving individual and community behaviour.

Overall across the cohort, there are early indications of impact and positive progress towards capacity strengthening and improving the health and wellbeing of people in LMICs

NIHR is committed to building research capacity for both UK and LMIC researchers. A total 89% of the 71 NIHR Academy trainees (formal training awards for Masters, doctoral and post-doctoral positions) in this cohort are from LMICs, with 65% being female.

1.3 Performance of delivery partners

During the reporting period, both teams at NETSCC and DHSC have increased in capacity in line with the increase in scale and complexity of the existing Global Health Research portfolio. This has required new members of the team to be onboarded swiftly, roles and responsibilities between NETSCC and DHSC to be clearly defined and agreed, and new processes to be established and embedded. Towards the end of this reporting period, the COVID-19 pandemic meant that both teams faced a significant change to working remotely and shifting to virtual communication. Despite these challenges, the relationship is working well, and the NETSCC and DHSC teams collaborate to agree timelines for deliverables which accommodate, as best possible, existing commitments and resources.

For this annual review specifically, NETSCC have incorporated a vast amount of learning from the process for Call 1 Units and Groups Year 2 annual reviews. NETSCC continue to

closely monitor all projects and are in regular communication with Groups. Where any complex, financial or sensitive challenges are experienced, NETSCC have escalated their recommendations to DHSC for input and approval, in line with the NIHR Global Health Research Escalation Policy. NETSCC continue to closely monitor the impact of the COVID-19 pandemic on this cohort through quarterly financial monitoring. Updates on delivery and finance are provided ahead of monthly Programme Management Meetings (PMMs).

1.4 What are the key lessons identified over the past year for wider DHSC/NIHR global health research?

At programme level, training opportunities and capacity building have become an increasingly important part of the NIHR offer. Many of the Groups have demonstrated a considerable effort to offer formal higher education opportunities and mentorship. However, as a minimum number of posts was not mandated in the call guidance and remit, not all Groups included formal trainees in their project teams given the three-year funding timeframe. For a future Groups funding call, NIHR will be mandating projects offer at least three higher education training posts as a minimum and future Groups awards will therefore be a 4 year duration to allow sufficient time for the completion of PhD research.

Assurance and risk management processes are continuing to develop and are incorporating learning from FCDO and UKRI.

The Call 2 Groups did not initially have a contractual obligation to meet the IATI standard by reporting data relating to ODA funding to the IATI registry. New clauses on requirements for contracting institutions to report to IATI were introduced for the majority of teams where they were successful securing costed or no costed extensions in May 2020. These clauses should be incorporated in any new funding contracts.

From a programme management perspective, following the introduction of the annual review process, NETSCC identified a need to require award-holders to state and to agree *key* milestones (in line with original agreed project aims) against which they can be monitored with NETSCC annually as part of the annual review. This cohort have now agreed milestones for year 3 which will be reported against in their year 3 reports.

1.5 DHSC to summarise key recommendations/actions for the year ahead, with ownership and timelines for action

Recommendation	Owner	Timeline
Continue to keep updated workplan Gantt chart and share with DHSC on a monthly basis	NETSCC	Ongoing, monthly basis
Explore through the Assurance Working Group how best to conduct virtual assurance visits and share learning	NETSCC	May 2021
Continue to monitor the impact of COVID-19 on this cohort through quarterly QSTOX and regular monitoring and report findings to DHSC	NETSCC	Ongoing
Work with project teams to support institutional adoption of transparency reporting requirements and incorporate new IATI clauses into new contracts	NETSCC	Ongoing through new contract variations, and adoption of the new ODA contracts for awards under Call 2 Units and Call 3 Groups from 2021
Link financial spend, project delivery against milestones and project risks into one overall RAG rating summary that can be reported at monthly programme management meetings as part of new risk register approach	NETSCC	End April 2021

2. Summary of aims and activities

2.1 Overview of award/funding call aims

The GHR research portfolio is underpinned by three core principles and requires that all research funded must:

1. meet eligibility criteria as ODA
2. deliver high-quality applied health research, building on the NIHR principles of Impact, Excellence, Effectiveness, Inclusion and Collaboration
3. strengthen research capability and training through equitable partnerships

The second NIHR Global Health Research Groups call launched in 2017. UK universities and research institutes were invited to submit applications to either expand or develop their ambitions to deliver world-class applied global health research, working in equitable partnerships with researchers in low-and middle-income countries (LMICs) to address under-funded or under-researched global health areas specific to those countries.

Specifically, applications were invited for:

- NIHR Global Health Research Groups: Existing specialist academic groups who wished to expand into the field of global health, especially in shortage areas of research. Funding available: Up to £2m over three years per Group.

The aims of NIHR Global Health Groups are:

1. To support UK specialist academic groups with a national track record to expand into global health to undertake high quality applied health research relevant to the needs of low- and middle-income countries, especially in shortage areas of research.
2. To generate high-quality policy/practice relevant research outputs that respond to global health research priorities, identified through priority-setting by the relevant LMIC.
3. To develop new equitable partnerships with researchers in countries on the Development Assistance Committee list, drawing on LMIC and UK expertise between LMIC and UK institutions, to ensure equity in new partnerships, collaborations and networks.
4. To strengthen capacity and capability in research and research support within LMICs at individual and institutional level through formal and informal training to support sustainability.
5. To promote the engagement of key stakeholders including public and patient involvement in the design and conduct of the research to ensure research to support dissemination and uptake.

6. To demonstrate pathways to impact through effective stakeholder engagement, dissemination and knowledge exchange to ensure research findings and learning is widely shared with and across low resource settings, to inform policy and practice and ensure results and all outputs are published in open access journals.

NIHR Global Health Research Groups Call 2 enabled those UK academic institutions with national research reputations to expand their research into a global context by developing new equitable research partnerships with LMIC institutions to address priorities to improve health outcomes and develop research capacity in LMICs.

This report focusses on the activities of the 20 Groups funded in the second year of their three-year contracts over the period 01 April 2019 to 01 May 2020. The individual aims of the 20 Groups are set out in Table 1. A full list of funded awards can be found on NIHR Funding Awards.

Table 1 . Aims and objectives of each Call 2 Group

Title	Aims	DAC-list Partner Countries
NIHR global health research Group on preterm birth and stillbirth at the University of Edinburgh (the DIPLOMATIC collaboration) at the University of Edinburgh	A UK and low and middle-income country (LMIC) partnership that aims to reduce preterm birth and stillbirth and to optimise outcomes for babies born preterm in Malawi and Zambia.	Malawi Zambia
NIHR Global Health Research Group on Respiratory Rehabilitation – (Global RECHARGE) at The University of Leicester.	A UK and low and middle-income country (LMIC) partnership that aims to develop a pulmonary rehabilitation (PR) programme that is deliverable and sustainable, but also offers a real opportunity to develop research capacity in LMICs.	Sri Lanka India Kyrgyzstan Malawi DRC
NIHR Global Health Research Group on PReterm bIrth prevention and manageMEnt (PRIME) at The University of Sheffield.	A UK and low and middle-income country (LMIC) partnership that aims to identify sustainable solutions to preterm birth through research that will impact South Africa and beyond. The researchers will work closely with service users, healthcare policymakers and administrators in partner LMICs to address key challenges of preterm delivery (PTD) care, focusing on underprivileged communities.	South Africa Nigeria India
NIHR Global Health Research Group on estimating the prevalence, quality of life, economic and societal impact of arthritis in Tanzania: a mixed methods study at University of Glasgow	A UK and low and middle-income country (LMIC) partnership that aims to understand the distribution, lived experience, health and economic impact of inflammatory arthritis in referral hospital and selected community settings in Northern Tanzania.	Tanzania Malawi
NIHR Global Health Research Group on improving asthma outcomes in African children at Queen Mary University of London	A UK and low and middle-income country (LMIC) partnership that aims to improve the quality of life for young people with asthma and their families in Africa, and to increase people's understanding and awareness of asthma.	Nigeria South Africa Ghana Tanzania
NIHR Global Health Research Group on Sepsis at the Liverpool School of Tropical Medicine	A UK and low- and middle-income country (LMIC) partnership that aims to reduce mortality and improve the quality of sepsis care through research focused in sub-Saharan African countries	Nigeria Ghana Cameroon Gabon

NIHR Global Health Research Group on a package of care for the mental health of survivors of violence in South Asia at University College London Institute of Child Health	A UK and low and middle-income country (LMIC) partnership that aims to improve the mental health and wellbeing of survivors of violence against women (VAW), modern slavery, and civil conflict in resource-constrained settings in India, Sri Lanka, and Afghanistan.	India Sri Lanka
NIHR Global Health Research Group on Asthma Attacks Causes and Prevention Study in Urban Latin America at St George's, University of London	A UK and low and middle-income country (LMIC) partnership that aims to substantially reduce asthma morbidity among the poorest and will promote economic development and welfare in LMICs through reduced costs to family budgets and health systems.	Brazil Ecuador
NIHR Global Health Research Group on stroke at King's College, London	A UK and low and middle-income country (LMIC) partnership that aims to enable a stroke network to be developed to provide advice and training bringing a sustainable change by increasing research and clinical capacity as well as improved care systems.	Sierra Leone
NIHR Global Health Research Group on Addressing Smokeless Tobacco and building Research capacity in south Asia (ASTRA) at the University of York	A UK and low- and middle-income country (LMIC) partnership that aims to reduce the burden of disease caused by smokeless tobacco (ST) in South Asian countries.	India Pakistan
NIHR Global Health Research Group on the Application of Genomics and Modelling to the Control of Virus Pathogens (GeMVi) in East Africa at the University of Warwick.	A UK and low- and middle-income country (LMIC) partnership that aims to improve capacity for response to endemic, epidemic and pandemic viral disease in East Africa. The project will create a sustainable collaborative network of institutes (UK and East Africa) that collectively support applied virus epidemiological research and provide an evidence base for decision making by public health authorities in East Africa.	Kenya Tanzania Uganda
NIHR Global Health Research Group on genomic surveillance of malaria in West Africa at the Wellcome Trust Sanger Institute.	A UK and low and middle-income country (LMIC) partnership that aims to establish laboratory and computational systems for genomic surveillance of malaria at the University of Ghana in Accra and the MRC Unit in The Gambia to facilitate this.	Ghana
NIHR Global Health Research Group on Improving the Management of Acute Brain Infections at University of Liverpool	A UK and low and middle-income country (LMIC) partnership that aims to improve the diagnosis of acute brain infections in adults and children in Malawi, India, and Brazil, to guide treatment and improve outcomes. The Group will also develop research capacity and develop a broader network of hospitals interested in studying brain infections.	Brazil India
NIHR Global Health Research Group on Atrial Fibrillation management at the University of Birmingham	A UK and low and middle-income country (LMIC) partnership that aims to increase atrial fibrillation (AF) awareness, improve AF detection and establish effective ways of implementation evidence-based AF management, particularly stroke prevention for disadvantaged populations in China, Brazil, and Sri Lanka.	Brazil Sri Lanka China (People's Republic of)
NIHR Global Health Research Group on health system responses to violence against women at University of Bristol	A UK and low and middle-income country (LMIC) partnership that aims to help health care systems in low- and middle-income countries (LMIC) respond effectively to women subjected to violence.	Brazil Sri Lanka West Bank and Gaza Strip
NIHR Global Health Research Group: Improving Outcomes in Mental and Physical Multimorbidity and Developing Research Capacity (IMPACT) in South Asia at the University of York	A UK and low and middle-income country (LMIC) partnership that aims to improve health and reduce deaths associated with diabetes, heart and lung diseases in people with severe mental ill health by addressing the most common health risk behaviours.	Pakistan India Bangladesh
NIHR Global Health Research Group on improving outcomes in sub-Saharan African diabetes through better diagnosis and treatment at the University of Exeter	A UK and low and middle-income country (LMIC) partnership that aims to transfer Exeter's internationally leading expertise in diagnosis and management of diabetes to researchers in Africa to create capacity to support collaborative multi-disciplinary research to improve diabetes care in Sub-Saharan Africa	Cameroon

NIHR Global Health Research Group on from surviving to thriving: Assessing and responding to occupational and public health risks in informal settlements and for informal workers and the effects of climate change on these risks: Building learning from India and Zimbabwe at the IIED	A UK and low- and middle-income country (LMIC) partnership that aims to improve the health, livelihoods, and resilience of informal workers by partnering closely with affected communities and local organisations.	India Zimbabwe
The NIHR Global Health Research Group on leveraging improved nutrition preconception, during pregnancy and postpartum in Sub-Saharan Africa through novel intervention models, Southampton 1000 Days-Plus Global Nutrition, at the University of Southampton	A UK and low and middle-income country (LMIC) partnership that aims to improve long-term maternal and child health by: 1) developing interventions to support nutrition and health from preconception into early life; 2) strengthening and sustaining capacity to conduct research with translation to policy and impact.	Ghana South Africa Ethiopia
NIHR Global Health Research Group on Clean Energy Access for the prevention of Non-communicable disease in Africa through clean Air: CLEAN-AIR(Africa) at the University of Liverpool	A UK and low and middle-income country (LMIC) partnership that aims to identify and overcome the challenges of achieving large-scale, equitable and sustained transition to clean fuels and to demonstrate the achievable impacts on health, household finances and the environment, to inform national policies.	Ghana Cameroon Kenya

Global Health Research themes across the 20 funded NIHR Groups in Call 2

Figure 1 themes are based on the 20 individual Group award HRCS classifications further grouped into 15 broad related themes. The portfolio is diverse with Lung Health the most predominant research theme followed by Life Course and Reproductive Maternal and Child health, and a range of topics including prevention, treatment and care of disease/ill-health, and health systems strengthening.

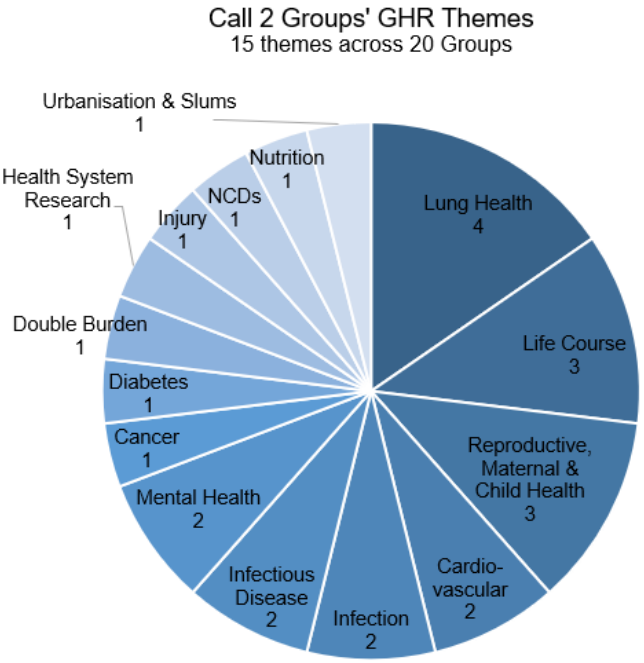

Figure 1. The number of individual Call 2 Groups (total = 20 Groups) categorised and grouped into broad research themes, based on their individual Health Research Classification System (HRCS) code. Note that each Group's research topic can cover multiple themes

Global geographic distribution of distinct Groups awards in LMICs

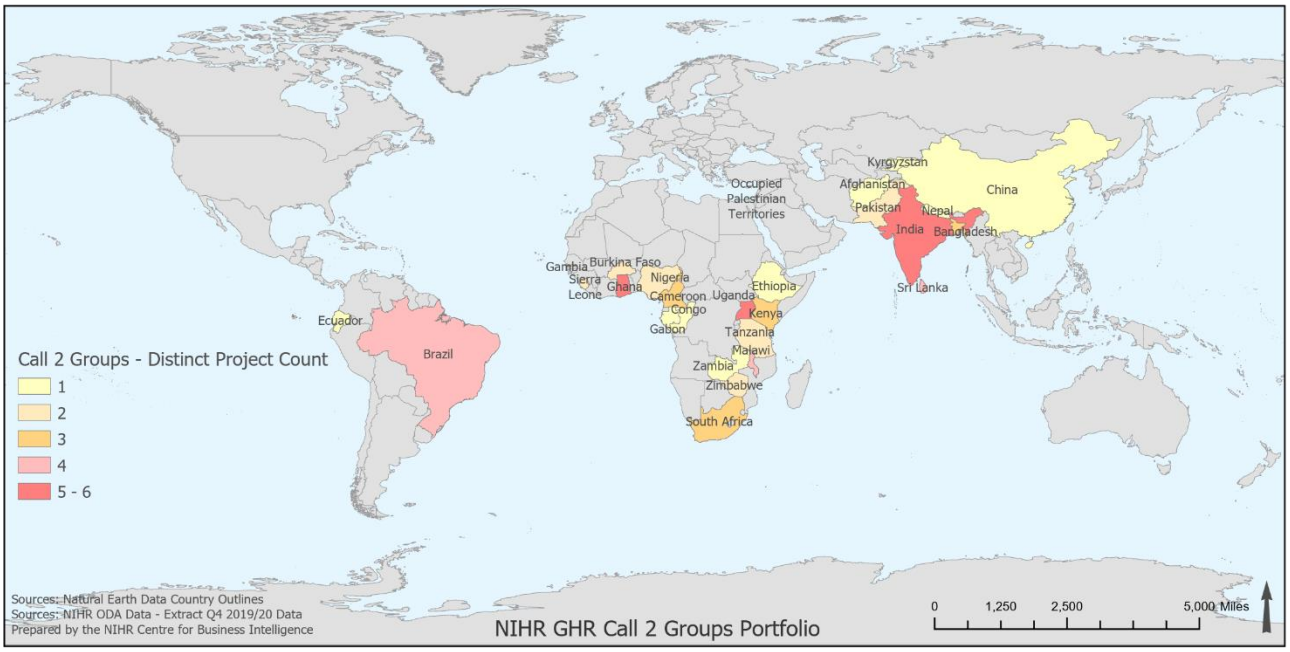

Figure 2. Heat Map showing LMIC location and number of distinct Call 2 Groups

Figure 2 shows the global geographic distribution of the 20 Group awards with a partnership in an LMIC (single LMIC counts per project). Non-LMIC partners (not shown) were eligible, where involvement was clearly justified and brought expertise not available within LMICs and supported ODA eligible research activities. The highest concentration of Groups partnerships in an LMIC was in India, Ghana and Uganda where six Group projects are partnering. Brazil and Malawi were also well represented with four NIHR-funded Group partnerships. 17 Groups were working with more than one LMIC partner (range 2–13 different partner countries), with three Groups working with multiple partnerships based within a single LMIC (all having at least two different partners in that country).

2.2 Is the funding scheme on track with delivery of milestones? Please summarise progress against any critical milestones and if they were achieved or delayed.

Delivery partner's assessment of progress against milestones/deliverables

NETSCC actively monitor and RAG rate the performance of each Group on a quarterly basis in terms of progress (delivery against milestones and financial performance). Each individual project risk rating is made in relation to project delivery, issues and responsiveness and financial risk, including financial performance. Green ratings reflect none or minor risks, amber ratings reflect moderate risks and red ratings significant risks to the programme delivery and/or financial performance.

In reviewing overall progress across the 20 Groups awards funded, **three** (15%) were amber rated due to **moderate delays** in progress against agreed milestones identified through NETSCC active monitoring**.** All three Groups rated amber experienced operational challenges that delayed planned progress and further delays are anticipated. Recognising a variety of challenges of working in global contexts (e.g. start-up, contextual, political, legal, financial) impact on progress and planned spend, there was a need for some flexibility within awards. Groups were allowed to submit change requests for justified amendments to work programmes and no cost extensions which were considered on a case by case basis via NETSCC and approved in line with the escalation policy by DHSC. 17 Groups were rated either green (nine groups) or green/amber (eight groups) in terms of overall progress. Projects reporting delays due to COVID-19 (reporting period is to 1 May 2020) and indicating a potential need for an extension to mitigate delays were assigned a green/amber rating.

Across all Call 2 Groups, **six** projects (30%) were rated amber in relation to their **financial performance** in the period (reporting underspends ranging from 49-56%). However, all Groups had plans to mitigate these underspends and/or delays through either a call-wide opportunity to apply for extensions in September 2019 (or via requests for changes to their programmes on a case by case basis). Applications to the extension call were received in March 2020 and recommendations made by an external Funding Committee on 6 May 2020. The remaining 14 Groups had low levels of underspend (up to 35%) in the period. In total NETSCC managed 28 changes to programme and virement requests in the period to help ensure projects could effectively deliver their programme of work and respond to changing contextual factors.

The May 2020 Funding Committee also considered applications for costed extensions for new work and non-costed extensions. These will be reported on in the Year 3 Groups Annual Review.

2.3 Delivery partner's assessment of how individuals/communities (including any relevant sub-groups) have been engaged and their needs reflected in identifying research priorities, design/planning, implementation, analysis, and reporting and dissemination - to include:

(a) Inclusion: Which vulnerable and/or at-risk groups have been identified through community engagement and mapping exercises?

Several Groups reported **identifying and including vulnerable or at-risk groups** in their research through community engagement activities. The types of vulnerable/at-risk groups targeted differed depending on the nature of the research. One Group described the inclusion of illiterate members of the community in their research in Malawi by ensuring

activities are communicated verbally as well as in writing, and aiding participants in completing questionnaires.

(b) Participation and two-way Communication:

Community engagement and involvement (CEI) had been used **throughout the research lifecycle** with some Groups describing the use of CEI in either research planning, input into methodology and study documents or materials, collection of data or dissemination of findings. This is important to note as this was not a specific requirement in the Call Guidance, but many teams had included this type of activity as good practice. The importance of infrastructure to support CEI such as **CEI leads for partner sites**, **and guidelines** about engagement or formation of CEI steering groups to manage CEI related activities across projects were reported as being helpful to facilitate CEI within projects. Most Groups reported either **outreach events** or the use of media to engage the public and communities, create awareness of their research and inform the public about health issues. The importance of **two-way communication** and sensitising the community to research was acknowledged. These involved either sensitisation activities (awareness raising) or **participatory methods** like seminars, workshops, meetings, conferences, or using media platforms such as TV, radio or social media to engage communities. Websites or materials such as books, brochures and posters were also used to support engagement. One Group reported that sensitisation of the community had also been achieved with the help of **community advisory panels** (a group of community representatives who advise the research team throughout the research life-cycle).

(c) Empowerment, Ownership, Adaptability and Localisation:

Groups reported **including local views and considerations** in their research and adapting activities if necessary, to ensure research was appropriate to the local context. In some projects, this was achieved using **community focus group** discussions or non-CEI specific qualitative research.

Some Groups reported that **community input shaped and influenced their research**; one Group described how CEI activities had helped identify cultural adaptations needed for their intervention and ensured it was appropriate to the local context.

Examples of **ownership and empowerment** through community engagement have been reported with one Group using a specific community engagement tool to guide priority-setting decisions around interventions for their communities. Another Group described an initiative led by community members using an art programme:

“From these CEI activities, our research and intervention development have been shaped directly from those we are trying to help. For the research in Kyrgyzstan, we have identified

the cultural adaptations required to design and deliver Pulmonary Rehabilitation and considerations specific to a post-TB lung disease population..."[NIHR Global Health Research Group on Respiratory Rehabilitation – (Global RECHARGE) at The University of Leicester]

Towards the end of the reporting period, teams reported postponement of face-to-face CEI activities and training due to the emerging COVID-19 pandemic (from January 2020).

3. Outputs and outcomes

High quality policy/practice relevant research and innovation outputs

3.1 Aggregated Research Outputs by type

NIHR guidance asks that Groups report on a broad range of outputs, which can include a range of publication types, and physical research outputs such as guidelines. Figure 3 displays the cumulative number of output types reported for Call 2 Groups which, at a minimum had been accepted for publication, were in pre-publication, or had been published by 16 August 2020*. A total of 17 out of 20 Groups reported having an accepted, pre-publication or published output since the start of their programme of work, with the most frequently reported output types being 24% presentations (n=55), 16% media (n=36 – encompassing TV, radio, and print media), and 15% journal articles (n=35). The 10 'Other' outputs reported included key review findings, webinars, in-country visits, project launch events, meetings with the Ministry of Health, and COVID-19 response strategic plans. Of the three Groups which had not reported any publications by 16 August 2020, one has since reported several as having been accepted for publication, another has several in progress or under review, and the third has various outputs planned for the later stages of the project.

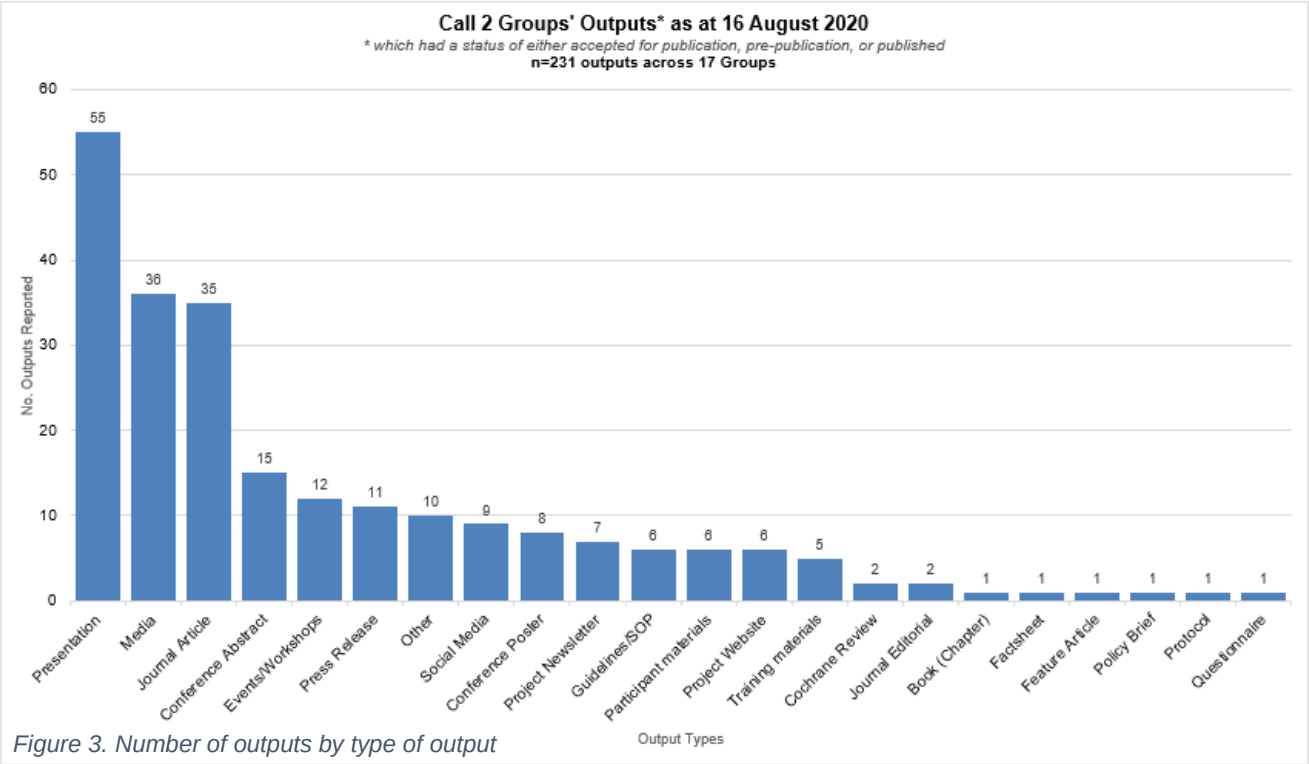

Figure 3. Number of outputs by type of output

* Data on output numbers and types are generated through self-reported notifications from research teams through the NETSCC Management Information Systems as an ongoing activity over the lifecycle of their awards. Following submission of Annual Reports on 1 May 2020, some teams were reminded that they had not added all uploads to the system. Therefore, the report on numbers and types of outputs was run in August 2020 to ensure a complete and accurate data set, noting that when output notifications are submitted retrospectively it is sometimes difficult to ascertain exactly when the publication was accepted for publication.

3.2 List of research and innovation outputs produced that are considered **by award holders** to be most significant in contributing towards high quality applied global health knowledge with strong potential to address the needs of people living in low- and middle-income countries.

A full list of the most significant outputs reported can be found in Annex D. Outputs reported as 'significant' by the Call 2 Groups spanned a wide variety of mediums. Several teams reported publications in high impact factor journals, some of which were noted to involve contributions from LMIC early career researchers.

Examples of a high impact factor journal articles:

Mycobacterium tuberculosis bloodstream infection prevalence, diagnosis, and mortality risk in seriously ill adults with HIV: a systematic review and meta-analysis of individual patient data -The Lancet Infectious Diseases, 2020

The NIHR Global Health Research Group on Sepsis at the Liverpool School of Tropical Medicine published this systematic review and individual patient data meta-analysis on *Mycobacterium tuberculosis* (TB) bloodstream infection (BSI). They found that in critically ill adults infected with HIV-TB, that a TB BSI is a common presentation that predicts mortality within 30 days. The combination of Sputum Xpert a rapid PCR based test for pulmonary TB and urinary lipoarabinomannan (LAM) a rapid test for disseminated TB increased diagnostic yield to detect 89% of TB BSI cases, better than the individual tests alone. Improved diagnosis followed by rapid initiation of anti-TB treatment within four days significantly reduced risk of mortality in these patients compared to patients where treatment was delayed.

Health and Climate Impacts of Scaling Adoption of Liquefied Petroleum Gas (LPG) for Clean Household Cooking in Cameroon: A Modelling Study – Environmental Health Perspectives 2020

The NIHR Global Health Research Group on Clean Energy Access for the prevention of Non-communicable disease in Africa through clean Air: CLEAN-AIR(Africa) at the University of Liverpool published this study. Cameroon government set a target that, by 2030 that 58% of the population will use LPG. The team used new mathematical models to simulate that successful implementation of Cameroon's National LPG Master Plan could avert around 28,000 deaths and 770,000 disability-adjusted life years by 2030, with no adverse impacts on climate.

Educational outputs were reported by several teams; examples include creation of education materials for Mumbai police on sensitive handling of cases of violence against women and children, and a training module developed for the Kenyan Ministry of Health to train the community health workforce in household air pollution issues.

Bespoke interventions have been developed, e.g. to support smoking cessation in people with severe mental illness (this intervention is ready for feasibility testing), and tools adapted to support LMIC research capacity strengthening, e.g. translation of the EQ-5D tool* into the Krio language (this was presented at the EuroQuol African Regional Meeting in Cape Town

in February 2020 and a translated version is still being assessed prior to roll out). Engagement with key stakeholders has resulted in outputs such as a policy brief for the Emergency Operations Centre of the Kenya Ministry of Health on preliminary predictions of the spread of COVID-19, a COVID-19 Kenya-specific forecasting model, and an interactive session with policymakers in Malawi discussing priorities when implementing health policies.

* The EQ-5D tool is used to evaluate quality of life. It includes questions about mobility, self-care, usual activities, pain/discomfort, and anxiety/depression.

3.3 Lead/senior authorship of outputs

Since the start of funding, 31 peer-reviewed publications have been cumulatively reported by 10 Groups. The authorship of these is summarised in Figure 4.Some publications are reported as having more than one lead or senior author; the total number of authors (40) is therefore higher than the total number of publications (31).

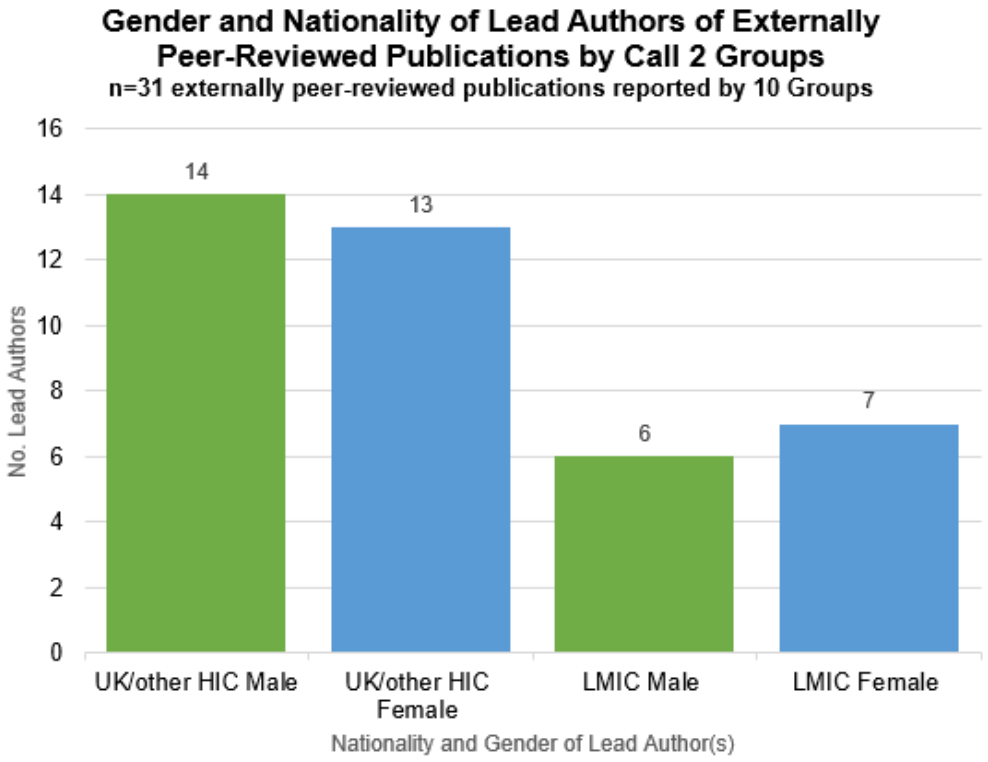

Figure 4. Cumulative number of externally peer-reviewed publications for lead authors by nationality (LMIC / HIC) and gender for Call 2 Groups since the start of funding. 10 out of 20 Groups reported having externally peer-reviewed publications in the period.

Figure 4 shows the breakdown of lead authors for externally peer reviewed publications by gender and nationality as self-reported by Call 2 Groups. A total of 33% (13) of authors were nationals from low-and middle-income countries (LMIC), whilst 68% (27) were from high income countries. A total of 17% (7) of all lead authors were female LMIC nationals.

There was a good balance in gender equity across all authorship; 48% of HIC authors and 54% of LMIC authors were female.

Informing policy, practice, and individual/community behaviour in LMICs

3.4 Delivery partner's summary of the most significant outcomes of any award level engagement and/or influence of policy makers, practitioners and individual/community behaviour

Most Groups reported that it was too early to report significant award level engagement. Instead, consensus on the best approaches to engaging with policy makers was often reported, and some practical ways of achieving this.

NIHR recommended all Groups engage policy makers at an early stage. Most Groups relied on established connections within the project team or Advisory Group to engage with policy makers. Raising awareness of the research whilst also understanding policy maker opinions and the issues ensured the Groups' planned research could directly address policy maker's priorities and evidence needs. Project teams reported that early engagement was useful to establish what does and does not work in terms of current policy implementation and was helpful in building trust and getting 'buy-in' from policy makers. In addition to providing evidence that an intervention works, Groups included plans to implement and scale-up the intervention, and analyses of feasibility (in terms of the existing health system and at the community level) and cost-effectiveness for policy makers. Many Groups noted that early involvement of policy makers with the project was more likely to translate to sustainable policies being implemented.

Some of the most effective engagement strategies reported were asking all project partners to document their established connections with policy makers at the outset and identifying potential new connections as a good starting point. Inviting key people to project launch meetings and annual meetings worked well. Some Groups with multiple LMIC partners reported the benefits of encouraging each country to host a meeting in turn to facilitate engagement with those policy makers. Others reported that distributing factsheets and information highlighting issues being addressed by the Group's programme can be effective, and encouraging media attention (i.e., radio and TV appearances and via social media) can stimulate public discussion of issues, which in turn captures the attention of policy makers. Several Groups emphasised the importance of strengthening relationships with officials and policy makers at the district, regional and national levels, and also engaging with the relevant regulatory authorities. Facilitating connections and discussions between government officials and the research institutions involved can be effective and where possible, the active engagement of WHO country offices helped to influence policy makers.

Outcomes resulting from engagement with practitioners

A number of examples of outcomes resulting from engagement with practitioners across the Call 2 Groups were reported. At national level, a household air pollution health and prevention module, produced for the Kenyan Ministry of Health, is being used to train community health workers. In Tanzania, the country's first ever rheumatology clinic has been set up at the Kilimanjaro Christian Medical Centre as a result of the Group's work. Another Group have defined new criteria for confirming a syndromic diagnosis of brain infections in LMIC settings (in three partner countries) and modified existing criteria for microbiological diagnosis of encephalitis in the UK, for LMIC settings.

At sub-national level, workshops on best practices for asthma management, inhaler use, and spirometry have trained 255 healthcare practitioners in three hospitals in Ecuador. Training on a diagnosis technique for severe mental illness is now being used in practice by psychiatrists in Rawalpindi, Pakistan. The Group working on sepsis in Malawi and Uganda have developed a hospital handbook on management in critical care which has already reduced waiting times in emergency departments. A centre at King Edward Memorial hospital in Maharashtra has been set up by a Group to provide counselling and crisis intervention for survivors of violence. Training and remote support in ultrasound (enabling midwives to take images and send them to the obstetrician for review) is helping midwifery decision making in real-time. A Group has delivered Comprehensive Pulmonary Rehabilitation training to physiotherapists in public hospitals in Uganda which is being used in practice.

Outcomes of engagement with and influence on individual/community behaviour

At the national level in Bangladesh, India and Pakistan, the Group addressing smokeless tobacco has set up Stakeholder and Community Advisory Panels to engage with the community on reducing both the use and cultivation of tobacco. Feedback from the community led to expanding the remit of the Group to involve out-of-school children and pregnant women in the study on smokeless tobacco use. At a more local level, a Group working in Sierra Leone set up a Stroke Survivors' support group for patients and carers, service providers and researchers which provides peer support and monthly research-specific engagement for example discussing and implementing dietary changes to reduce further stroke risk. A Group working in India has conducted hand-washing demonstrations using soap and water using pictorial communication materials as part of its community health promotion efforts. This has been very helpful during the COVID-19 pandemic, when people immediately recalled the value of thorough handwashing.

More generally, some effective approaches used across the Call 2 Groups to engage with the community include raising awareness through events and activities such as school visits, regionally distributed literature tailored to local populations, involving community

stakeholders in project launch meetings, and maintaining ongoing conversations with key community leaders throughout the lifetime of the Groups' programmes.

LMIC and UK researchers trained and increased support staff capacity

3.5 Aggregate level summary across awards of individual capacity strengthening supported by at least 25% NIHR award funding

The NIHR Academy defines trainees as individuals undertaking formal training/career development awards that are competitive, include a training plan, have a defined end point and who are in receipt of at least 25% NIHR award funding. A breakdown of the types of higher degrees undertaken by NIHR Academy Trainees with the percentage that are LMIC nationals and female is shown in Table 2 below. Nine of the 20 awards do not have any NIHR Academy trainees, so data presented covers 11 Groups.

Eighty-nine percent of NIHR Academy trainees are from LMICs and 65% are female. This indicates that the Group awards are supporting LMIC capacity strengthening and positively impacting on gender balance across the allocation of formal training awards. There is a broad spread of trainees across all the different award types, with the highest total number of trainees studying for a Masters (40% of all trainees), followed by Doctoral (30%), Post-Doctoral (18%) and 13% unspecified.

The number of NIHR Academy trainees has nearly doubled in the last year, increasing by a further 27 LMIC individuals from Groups Call 2 year 1 reports (previously 36 LMIC NIHR Academy trainees).

Some Groups supporting formal trainees used flexible ways to fund formal training awards where the duration extended beyond the term of funding award.

Table 2. Type of higher degrees undertaken by NIHR Academy trainees (not all Groups included formal trainees in their programmes, given the 3-year funding period)

Training level	Total number who are currently undertaking or have completed during the award period (% total trainees)	% LMIC nationality	% female (UK and LMIC combined)
Masters	28 (39%)	100%	64%
PhD	21(30%)	86%	61%
Postdoc	13 (18%)	69%	69%
Other (e.g., research fellows (not included above) where training level not indicated	9 (13%)	90%	80%
Total number of trainees	**71**	***63 LMIC nationality (89% total trainees)***	***46 females (65% total trainees)***

A total of 65% (46) of all trainees were female compared to 31% (22) male. A small number 4.2% (3) trainees did not report their gender.

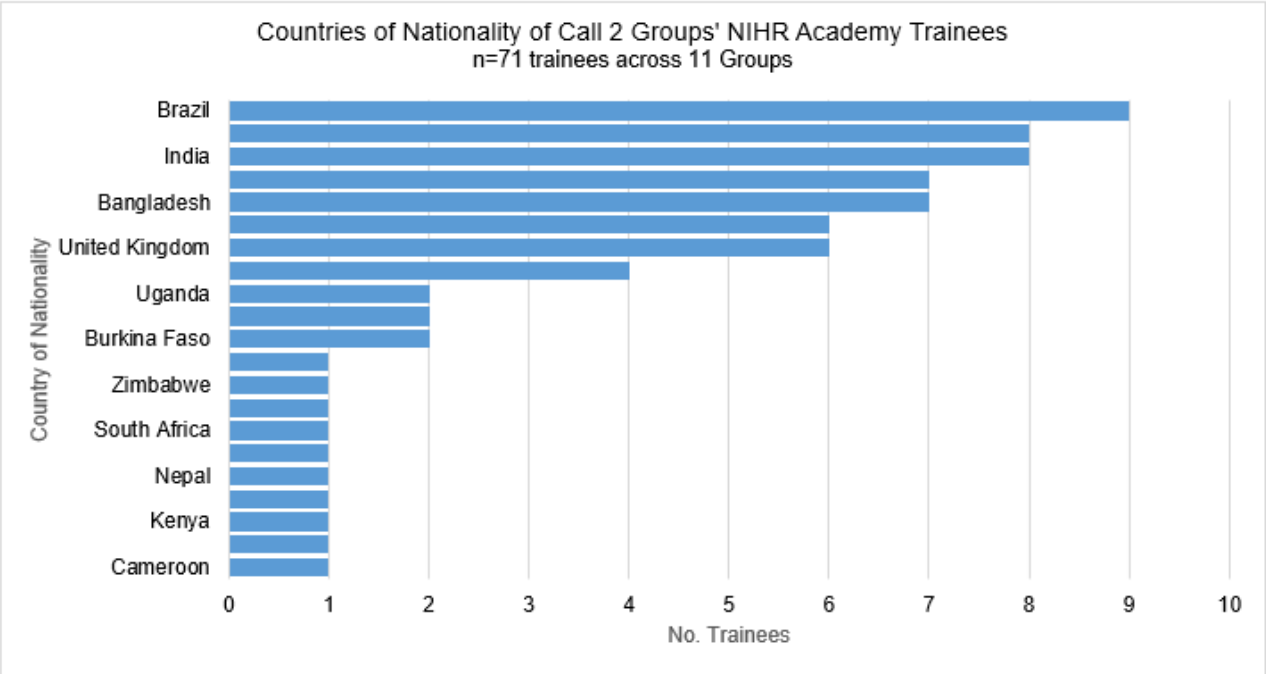

Figure 5. Number (n=71) and nationalities of NIHR Academy Trainees funded within Call 2 Groups (11 out of 20 Groups reported data)

Figure 5 shows the countries of nationality of Academy trainees reported. 89% of the trainees reported their nationality as being from a low- and middle-income country. The LMICs with most trainees were 13% Brazil, and 11% from India and Malawi. Coverage was

reflected across Asia, South America and Africa. The remaining 10% reported their nationality as being from the UK (7%), Poland (1.5%), or did not state their nationality (1.5%).

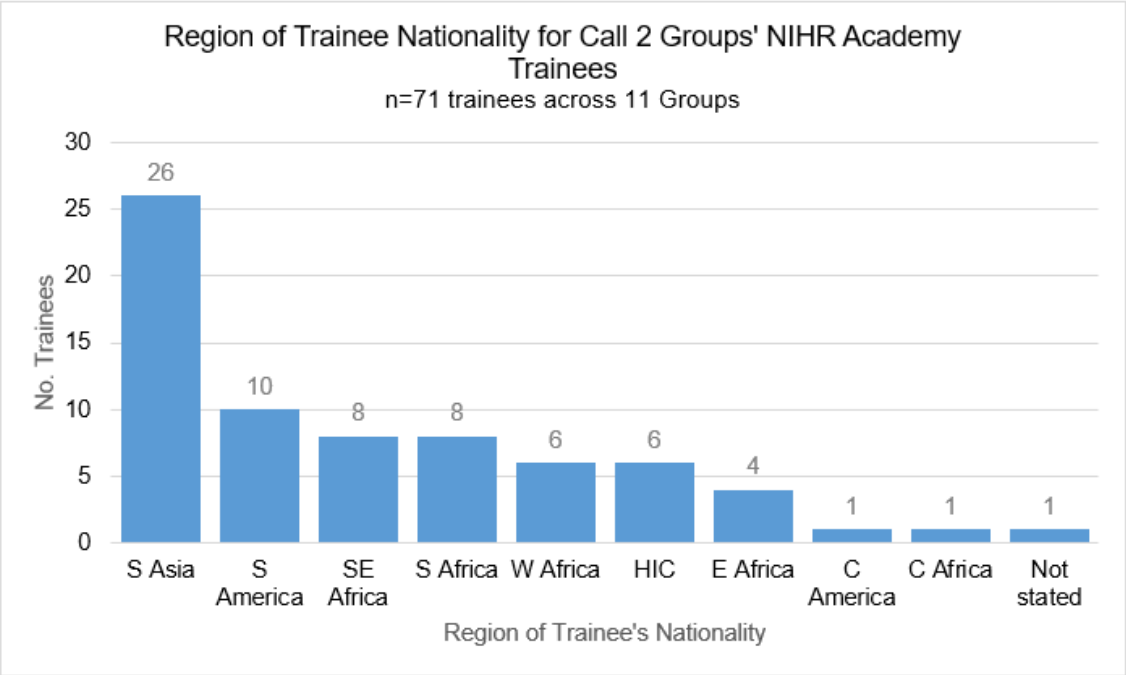

Figure 6. Numbers of NIHR Academy Trainees across the different global regions reported by 11 out of 20 Call 2 Groups

Figure 6 groups the countries of nationality reported by the NIHR Academy trainees into regions. South Asia had the highest proportion of trainees (36%, 26 trainees), with the next most frequently reported regions being South America (14%, 10 trainees) then South East Africa and Southern Africa (both 11%, 8 trainees). High income country nationalities are grouped under the HIC label.

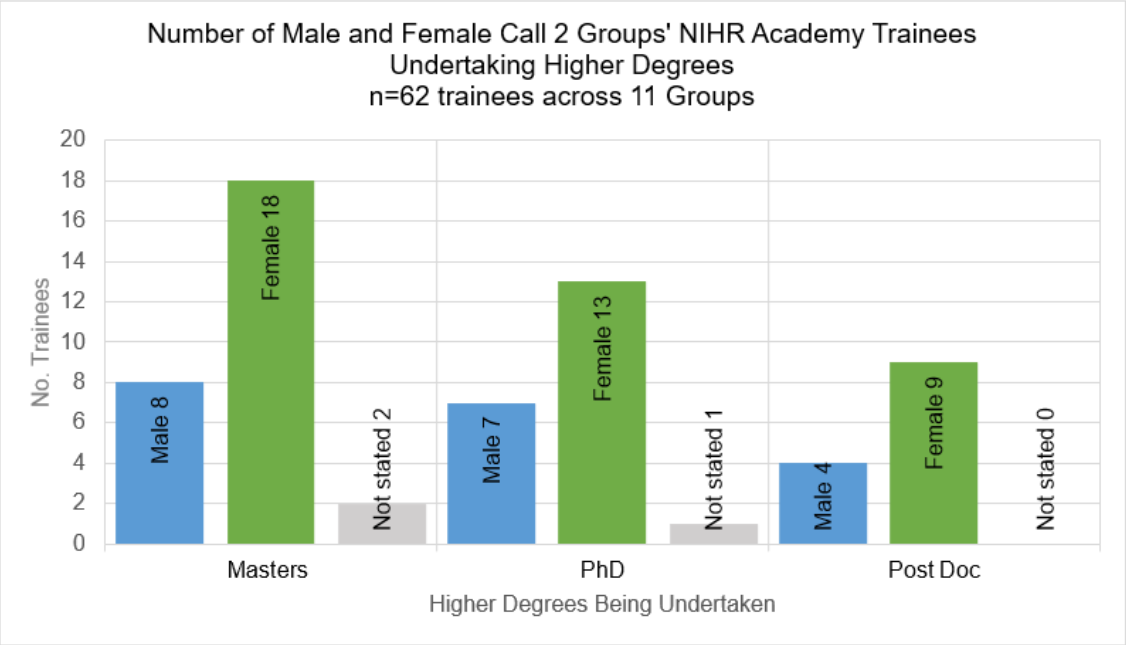

*Figure 7. Number and reported gender of NIHR Academy Trainees undertaking higher degrees within Call 2 Groups**

Figure 7 shows the reported gender of the NIHR Academy trainees undertaking a higher degree (Master, PhD or Post-Doctoral fellowship). The number of female trainees were double that of male trainees undertaking each type of higher degree, which reflects the overall gender balance across the whole cohort of trainees. As a percentage difference there were: 35% more females undertaking Masters, 27% more females taking PhDs, 39% more female Post Docs.

*Nine trainees reported by the project teams were not included in the above chart: eight who are not currently undertaking a higher degree (six of whom were defined as undertaking a research fellowship) and one who is applying for a PhD. This explains the differences in totals between Figures 8 and 9.

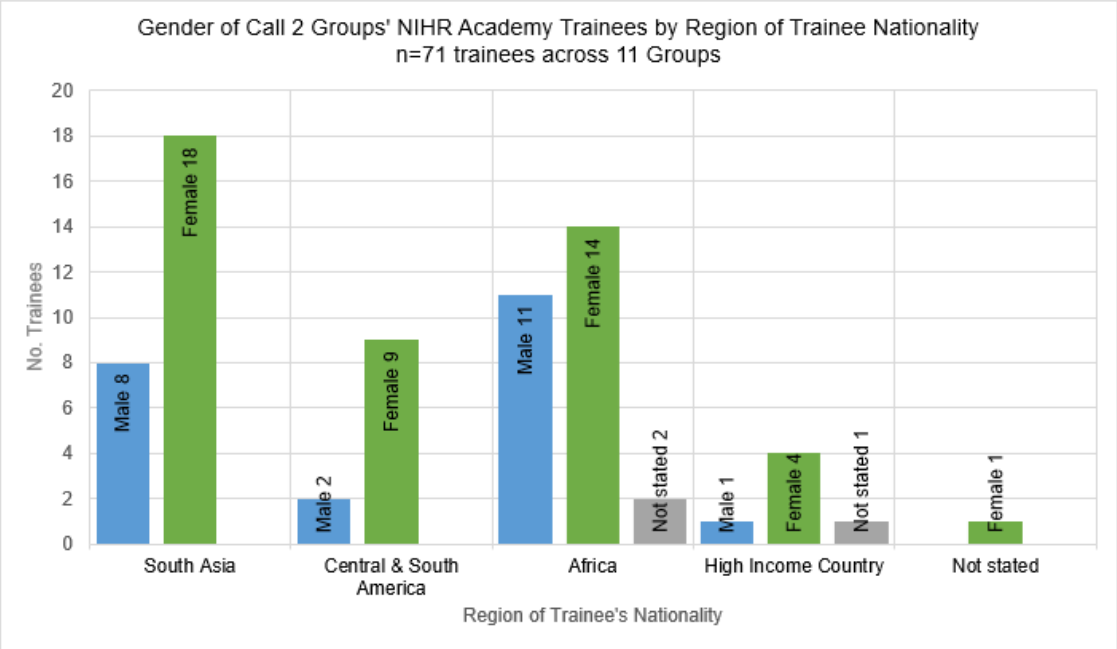

Figure 8. Number and gender of Call 2 Groups NIHR Academy Trainees by region of trainee nationality

Figure 8 shows the reported genders of the 71 NIHR Academy trainees within each region (grouped by country of nationality) reported across 11 out of 20 Groups. The regions with the highest number of trainees (South Asia, Central & South America, Africa) reflect the overall gender balance across the whole cohort, with significantly more female trainees. High income country nationalities include the UK and Poland and are grouped under HIC.

The box below provides an example of a Group that is using training as a way of ensuring sustainable and equitable partnerships:

The NIHR Global Health Research Group on Sepsis at the Liverpool School of Tropical Medicine, working in Gabon, Malawi and Uganda, is training one research fellow in each country. These fellows are working together as a way of establishing sustainable and equitable partnerships across the Group as well as ensuring the work of the Group reflects and feeds appropriately into the local context. The team expects that by the end of the grant period, each of the fellows will be semiautonomous in setting up, overseeing and reporting clinical research. Each of the fellows has a bespoke training plan which identify training needs within the study budget. The fellows have been instrumental in leading science communications (World Sepsis Day events) and have also, for example, been part of peer-education initiatives in Malawi including journal clubs and research skills training. With the policy partners at AFIDEP, ARCS team members are learning skills in interaction with the national stakeholders and have been part of meetings at this level to promote sepsis and quality of care for the critically unwell.

The aim has been to develop sustainable local ownership of this work, developing capacity towards research independence in designing studies initiated through training three current Sepsis fellows and employing local people.

LMIC institutional capacity strengthened

3.6 Delivery partner's summary of evidence of activities and outcomes from across awards demonstrating how NIHR funding has helped to strengthen LMIC institutional capacity to contribute to and lead high quality research and training within a national research ecosystem.

Financial Assurance Fund activities

In 2018, NIHR launched the Financial Assurance Fund (FAF), providing an opportunity for funded Global Health Research Units and Groups to apply for additional funding for specific activities aiming to build financial management capacity in the LMIC partner organisation(s). The application process was managed by NETSCC with proposals considered through an externally appointed Funding Committee. FAF funding was awarded over a 12-month period with up to £50,000 available to applications from single institutions and up to £100,000 for joint applications. Successful applications were required to demonstrate the ability to reduce financial risk and strengthen financial capacity in LMICs partner organisations and provide sustained outcomes beyond the end of NIHR funding.

Three Call 2 Groups were awarded FAF funding during the reporting period. Across the awards, FAF funding was used to deliver activities to support partners to prepare for Good Financial Grants Practice (GFGP) assessment and accreditation. Examples of other funded activities included training on financial management and costing research proposals, development and production of governance manuals, and accounting software purchase and training.

Other institutional capacity strengthening

All Groups have cited examples of recruitment and training initiatives that are strengthening capacity both within their institutions and regionally. Sustainable local ownership of work is encouraged both during and beyond the term of the grant with local partners employed to lead on projects. Training and development has focussed mostly on early career researchers (ECRs). Other training and development opportunities have been noted across the programmes, including safeguarding training, strengthening institutional policies and procedures around bribery and corruption, and finance reporting capacity to support reporting requirements for IATI.

A collaborative approach to training has enabled teams to increase capacity and develop staff, whilst preparing the foundations for work to continue beyond the grant period. Examples of this include:

- specialist training provision has increased capacity for lung function testing across four African sites (Nigeria, Uganda, Zimbabwe and Malawi)
- KEMRI-Wellcome Trust Research Programme (KWTRP) lab has become the principal laboratory carrying out whole genome sequencing in Kenya
- 24 midwives have been trained in ultrasound in Malawi, filling a significant gap in maternal care provision
- GEOCENE and Mobenzi researcher software training has created professional development opportunities for fieldworkers in Cameroon, Eldoret and Nairobi (Kenya), and Obuasi (Ghana).
- the training of three dedicated sepsis clinical research fellows in Malawi, Gabon and Uganda
- 40 individuals have been trained in data collection methods in Sri Lanka
- in Indore (India), more than 400 members of Slum Women's Groups (affiliated with the Urban Health Resource Centre) have been trained in identifying study participants, an equitable and effective approach to support inclusion in the research study by engaging marginalised workers from within the community
- Training local people in fieldwork and spirometry is helping to create work opportunities and establish excellent capacity for lung function testing and related quality control in East Africa

Clinical and research staff across the programmes indicate a willingness and intention to share their knowledge, to build future capacity and sustainability.

In addition to the above examples of activities, dissemination of training resources, mentorship and study opportunities across countries is enabling sites to implement learned skills at scale and speed. 10 of the 20 Groups actively reported shared skills in this way.

The box below provides an example of a Group who delivered webinars to improve research skills and clinical knowledge of their partners:

The NIHR Global Health Research Group on Improving Outcomes in Mental and Physical Multimorbidity and Developing Research Capacity (IMPACT) in South Asia at the University of York, ran a series of nine webinars aimed at researchers and health professionals across their partner countries (Bangladesh, India, and Pakistan) with a view to enhance the attendees' research skills and knowledge of multimorbidity. The content included topics such as statistical analysis, systematic reviews, TB multimorbidity, and planning an RCT, and the webinars attracted a total of 326 participants (an average of 36 for each). Additionally, the Group's webinar on the psychological impact of COVID-19 had over 70 participants, and a South-South webinar run by NIMHANS entitled "Physical Health in Severe Mental Illness: Refocusing the Gaze" had 140 online and 45 on-site participants from a wide variety of professional backgrounds and countries.

3.7 Aggregated distribution of support staff

Table 3. Number of FTE support staff employed in LMICs and HICs during the last 12 months

	Total number of FTE support staff (research managers, finance, admin, community engagement practitioners, other) in post during the last 12 months - note that this may not be a whole number depending on institutional employment policies*
Employed in LMICs	84.96 FTE
Employed in HICs	18.25 FTE

*e.g. if an institution employs 5 support staff, of which 3 work full time for 12 months, 1 works full time but leaves after 6 months, and 1 works 1 day/week for 12 months, the total reported would be: 3 + (1*0.5) + 0.2 = 3.7 FTE

Table 3 shows that the percentage full time equivalent (FTE) of support staff was 82% in LMICs and 18% HICs; overall 64% of the total FTE across Groups Call 2 was contributed by support staff employed in LMICs.

Equitable research partnerships and thematic networks established/strengthened

3.8 Delivery partner's assessment of the extent to which this NIHR funding has contributed towards building or strengthening equitable research

partnerships/collaborations and thematic networks (where applicable, including engagement with communities).

Establishing and strengthening equitable partnerships and thematic networks is a key principle for NIHR Global Health Research funding. Equity in partnership was evidenced by all Groups throughout the research life cycle. All teams were required to set up equitable systems of governance and provide evidence that LMIC members were appropriately and equally represented in relation to their UK counterparts. The approaches to equity often included establishing multi-way agreements and clear Terms of Reference to ensure equity in leadership roles, communication and publication.

The inclusion of partners and building of equitable partnerships was achieved in several ways.

*Promotion of LMIC ownership through***:**

- shared or local leadership of work packages and employment of local study co-ordinators
- LMIC partners leading recruitment of research staff and engagement of local stakeholders
- shared management of project work and decision making
- co-supervision of students between UK and LMICs
- LMIC partners leading or contributing to publications and in some cases leading project publication plans and strategies
- contribution of LMIC partners in the dissemination of project findings

One example of promoting local ownership:

"We are working towards local ownership of ASTRA's outcomes by involving local research teams at every stage of the programme. Local teams have autonomy in recruiting their own research staff and participate equitably in decision-making. Local teams use their connections to recruit stakeholder panels and are well-placed to guide the process of influencing policy makers." [NIHR Global Health Research Group on Addressing Smokeless Tobacco and building Research capacity in south Asia (ASTRA) at the University of York]

Regular engagement with local partners/stakeholders/partners

All teams held annual meetings with LMIC partners to monitor project process and share learning; these were largely face-to-face. However, many meetings were rapidly moved to a virtual platform due to the COVID-19 pandemic. In addition, ad hoc north-south visits to engage partners and support project activities were reported. Occasionally due to travel restrictions for certain countries, face-to-face visits were not possible, but partners were

successfully engaged through an appropriate virtual platform. South-south partner meetings have encouraged greater engagement and strengthened relationships and networking between LMIC partners.

Project management oversight mechanisms range from team-based management meetings up to external Advisory Groups and steering committees which tend to meet virtually on a regular basis. Pre-pandemic, some meetings would take place in person. Platforms used for virtual meetings include Zoom, Skype or WhatsApp and usually had equal partner representation and rotating chairs to include LMIC partners. Some teams noted that poor internet connection and large time zone differences can make the communication with partners more challenging; trusted relationships developed over time help mitigate the downsides of virtual engagement.

Establishment of cross-cohort initiatives

Groups described establishment of networks related to their topic area including north-north, north-south (networking with other NIHR funded Groups) and south-south collaborations. In addition, NETSCC have helped facilitate the establishment of a number of networks and initiatives between Groups as well as NIHR Global Health Research Units and other international research collaborations (Table 4).

Table 4 below summarises the thematic networks led by Call 1 Units and Groups with membership from the Call 2 Groups.

Table 4. Summary of inter-portfolio networks

	Led by	Number of Units/Groups in networks	Aims
Respiratory	Universities of Edinburgh (GHR 16/136/109) and Liverpool (GHR 16/136/35)	9 (+2 GCRF and 1 GACD)	To work collaboratively in the area of respiratory research on agreed deliverables and by jointly providing funding for a research post. The UK's Global Health Respiratory Network: Improving respiratory health of the world's poorest through research collaborations
Health economics	University of Birmingham (GHR 16/136/79)	13	Share learning, explore common challenges related to methods and discuss strategies to address challenges of conducting applied health economics in LMICs.
Data governance	University of West of England (GHR 16/137/49)	18	To help NIHR projects develop a low-cost high impact data management strategy that can be used to develop local capabilities by bringing together existing world-leading expertise to run a virtual online course for data governance champions.
Data governance	University of Edinburgh (GHR 16/136/109)	3	Development of a global network of collaborators interested in data management and secure sharing of data.

3.9 Delivery partner's summary of any other noteworthy outcomes beyond those captured above (note that these may include unanticipated outcomes (both positive/negative), outcomes outside health, and any other secondary benefits to the UK or any other countries)

Impact of the coronavirus pandemic

Following the start of the COVID-19 pandemic, an evaluation was carried out in April using adaptions to routine quarterly QSTOX reporting (Q4 2019/2020) to understand potential delays to delivery, contextual issues, redeployment of staff to local responses and the potential impact on spend and delivery across the cohort. The feedback showed that most teams were moderately impacted and were forced to either pause their studies or to focus on work that could be continued remotely, e.g. virtual engagement/meetings, analysis of data collected and writing publications. Several teams indicated that staff had been redeployed to support in-country COVID-19 pandemic responses. Groups were creative and all continued to progress aspects of their work remotely; no Group had to completely stop activities.

Eight Groups reported having between 50-99% of research activities impacted. Activities most impacted were those involving participant recruitment and data collection due to the implementation of stringent restrictions on travel, social interaction, and access to public spaces, and staff being redeployed to support their country's response to COVID-19. Additionally, a very high number of meetings, training events and community and policy maker engagement activities were cancelled. Teams all moved quickly to repurpose funds and/or focus attention on activities that could progress whilst some activities had to be paused or approaches revised. More information on the risks related to the COVID-19 pandemic, its impact and the NIHR response is covered in Section 5.

The COVID-19 pandemic provided several opportunities for established teams and in-country partners, especially those focusing on respiratory research, to rapidly support their global partner's response and address priorities. A Group working in Kenya has, for example, been involved in the publication of COVID-19 data across Africa, including transmission modelling and genome sequencing data. They also participated in a SARS-CoV-2 sequencing training to develop capacity in laboratories across the East African Region, coordinated by KWTRP in collaboration with Africa-CDC. Other Groups collected additional data to help assess the impact of COVID-19 and the in-country responses on use of health care, health outcomes and mental health. Several Groups provided advice either to ministries of health to support regional and national preparedness, or literature for local populations on public health responses and reducing risk of infection, whilst one assessed perceptions of health care workers regarding COVID-19 infection and control. These

additional activities, most of which were supported by NIHR, were approved in line with the COVID-19 change to programme guidelines.

Challenges with international visas

Several teams had experienced issues acquiring visas from the UK Home Office for their LMIC partners to enter the UK for short term project related activities and training. NETSCC formulated a NIHR letter in support of the LMIC partner application; the initiative was positively received, and evidence is currently being collected to help evaluate the impact of the initiative. The visa support letter has now been adapted to be applicable for use across all NIHR GHR programmes.

4. Value for money

- Delivery partner to summarise their approach towards ensuring value for money in how the research is being undertaken.

NIHR ensure that research teams fully justify how funds will ultimately contribute towards improved health outcomes for people living in LMICs and that research is contextually appropriate and generalizable to maximise the impact of the research for every pound spend across the research-life cycle. Ongoing assessment of value for money (VfM) is integrated within NETSCC's research management processes and builds on the DfID/FCDO 4 E approach which defines value for money as the optimal use of resources to achieve the intended outcomes (from inputs to outputs, outcomes and impact).

The 4 E's are defined as follows:

- **economy –** the degree to which inputs are being purchased in the right quantity and at the right price
- **efficiency –** how efficiently the project is delivering its outputs, considering the rate at which intervention inputs are converted to outputs and its cost-efficiency
- **effectiveness –** the quality of the intervention's work by assessing the rate at which outputs are converted into outcomes and impacts, and the cost-effectiveness of this conversion
- **equity –** degree to which the results of the intervention are equitably distributed

4.1 Economy

Eligibility of costs and overall value for money are reviewed by NETSCC during the application review process, at contracting, during project set-up, and continues throughout active monitoring. Throughout monitoring, Groups are required to demonstrate compliance with institutional procurement policies, provide justification for budget virements and/or any changes to the contracted programme of research in accordance with published NIHR finance guidance.

Groups spend is monitored via quarterly financial reports, with use of random expenditure verification checks of invoices/transactions, and deep dive spot checks where necessary. Within this reporting period NETSCC conducted spot checks on 5 awards (see section 5.1).

Groups demonstrated evidence of seeking VfM through obtaining fair equipment prices through tender, following established procurement processes, appropriate costing of staff recruited, utilising their own resources/infrastructure where possible, organising joint purpose activities to reduce costs (e.g., dual conferences and training events) and other cost saving activities (e.g., use of teleconferences over face-to-face meetings).

4.2 Enhanced efficiency

Enhancing impact

To maximise opportunities to amplify timely stories of impact, all Call 2 Groups are required to upload all outputs generated, within 14 days of publication, onto the management information system (MIS). NETSCC track and use data on outputs to demonstrate the emerging impact of ODA funding on intended beneficiaries. Annually, teams report on their most significant outputs, addressing the evidence needs of people living in LMICs, and examples of these are listed in section 3.3.

Enhancing financial efficiency

Groups demonstrated evidence of enhancing financial efficiency in the period. Examples included organising joint purpose activities to reduce costs (e.g. dual networking and training events), improving their infrastructure/equipment (e.g. IT equipment and connectivity to improve performance), using existing, experienced staff and equipment, adopting good process management (e.g. decision making delegated to partners to improve efficiency), setting up research early (e.g. early appointment of students to prevent delays) and actively preventing duplication of work/research.

Enhancing sharing of intellectual knowledge

Groups commonly reported on the efficiency of their dissemination activities, e.g. methods of knowledge exchange and development of partnerships and networks. NETSCC support wider networking and shared learning across the cohort by facilitating engagement between researchers, the development of research consortia and themed networks, and sharing of best practice for example, in capacity strengthening and on-line training materials via the NIHR Academy trainee's forum, and network of Group Training Leads.

4.3 Effectiveness

Each Call 2 Group submitted a proposed pathway to impact within their application, these were peer reviewed by subject experts and assessed for scientific merit and feasibility by the Funding Committee. Through regular monitoring, NETSCC ensures adherence to all funded aims. Where changes are required, regarding the partners or research plans, cases are carefully scrutinised through the Change to Programme process to ensure these originally funded aims will still be met.

NIHR ensure effective knowledge exchange and transparency across the cohort and beyond, promoting the outcomes and impact through case studies and publishing findings of these Annual Reviews which are made available in the public domain.

As described in section 3.4, several examples of early impact have been identified through the 2019-20 Annual Reports, including engagement with high-level contacts in ministries and policymakers to ensure study outputs were rapidly translating into effective outcomes. As mentioned above, Groups must inform NETSCC of all outputs generated, which are reviewed in relation to achieving their research aims and amplified through NIHR to increase coverage and transparency of research findings, including use of SLACK and other communications channels.

4.4 Equity

NETSCC is committed to supporting research teams to establish equitable partnerships. Supporting this ethos, NETSCC continually assess Call 2 Group's approach to equity and diversity throughout the life course of their funding. Through active monitoring, annual reporting and review of changes to programme, NETSCC maintain oversight and identify any concerns related to equality, diversity and inclusion to be addressed by teams as necessary.

Through annual reporting, data is collected on the gender and reported disability of staff and trainees within each Group's research and support teams, both in LMICs and HICs. The gender split of lead, co- and last authors on peer-reviewed publications generated through each Group's research is collected and reviewed by the NETSCC portfolio lead (see section 3.3). Similarly, data on gender is collected on funded trainees and is reported in section 3.5. The trainee data clearly demonstrates that NIHR funding is having a positive impact on providing funding for female researchers.

As described in section 3.8, all Groups are actively promoting equitable partnerships. This is demonstrated through elements such as equitable distribution of funding to each partner, development of authorship/publication policies to promote more local authorship and appropriate recognition of researcher's contributions. Addressing equity within research participants is discussed in section 2.3.

- How are you (the delivery partner) ensuring that the funded research benefits vulnerable groups to improve health outcomes of those left behind?

The Groups Call 2 guidance set out clear expectations that the research must focus on the health and well-being and benefit the most marginalised and vulnerable groups in LMICs. This was carefully assessed as part of the application review process and when any changes are requested throughout the lifetime of the award.

Through annual reports, NETSCC monitor how the needs of vulnerable groups have been considered and met as part of the design, implementation and translation of the research. 17 Groups reported the inclusion of at risk and vulnerable groups in their research. As

described in section 3.2, this was often achieved through CEI activities to ensure the voice of all community members were heard.

NETSCC monitor progress on attaining all ethics approvals and keep copies on the project record. This ensures an independent committee has assessed that the research will do no harm to participants and will safeguard vulnerable and at-risk groups.

Research data and outputs

Research data collected is usually disaggregated by gender, socioeconomic status or other characteristics enabling sub-group analysis and health inequalities to be identified. NIHR promotes openness and transparency in research through a number of its policies, guidance and platforms and in particular promotes sharing data and open access publications. To ensure research outputs are accessible to the global health community, NIHR require publications to be available in open access journals and are tailored to meet the needs of different audiences. NIHR support teams to amplify awareness of research findings through production of impact case studies, cohort meetings, NIHR led panel sessions, these annual reviews, use of NIHR communications platforms, SLACK and by subscription to NIHR Global Health Research newsletters.

4.5 Lists of additional research and infrastructure grants secured **by LMIC partners** during the NIHR award.

A summary table indicating amount of all grants secured by LMIC partners.

Funder	**No of applications successfully awarded**	**Amount awarded (GBP)**
UK funders: DFID/Wellcome/NIHR/MRC/AHRC	3	£1,904,000
LMIC Government/ HEI funding	7	£783,000
LMIC NGOs/Professional Societies/Commercial/charities	5	£1,011,000
Other international funders: NIH/ Grand Challenges Africa/ HIC HEIs	4	£1,870,000
Total		£5,570,000

A total of 24 awards amounting to £5.6m has been reported to be secured since Group Call 2 awards commenced in 2018. Of this, £2.2m is known to have been awarded to LMIC partners. For those where the percentage of the award allocated to LMIC partners was stated, 98% of this funding was allocated to LMIC institutions.

A variety of activities have been funded through additional research awards, e.g. research studies, pilot studies, bursaries for LMIC doctors to attend training courses, PhD studentships for LMIC-nationality trainees, a dedicated service within a hospital, and work supporting the COVID-19 pandemic response.

Several awards were particularly high-value, for example £1.73m secured by Sangath India from the National Institute of Mental Health for a study entitled “IMPlementation of evidence-based facility and community interventions to reduce the treatment gap for depression”, the £1.66m award from the DfID-Wellcome Epidemic Preparedness fund secured by UVRI Uganda/MRC The Gambia/LSHTM UK/GCVR UK, and an award secured by SNEHA India of £636,410 from Azim Premji Philanthropic Initiatives.

Some partner organisations have been successful in securing awards from national and/or governmental sources, e.g. the Government of Maharashtra’s Department of Women and Child Development, the Conselho Nacional de Desenvolvimento Científico e Tecnológico in Brazil, Bangladesh’s Ministry of Health and Family Welfare, and the African Academy of Sciences.

There have also been successful applications for funding from industry sources, e.g., Oracle, and one Group reported having secured in-kind support in the form of equipment, media coverage, and travel costs.

5. Risk

5.1 Most significant risks (both in terms of potential impact and likelihood).

Table 5 shows the five most significant risks, listed in risk registers, across Call 2 Groups, and the strategies to manage and mitigate these risks. Risks to delivery of programmes of activity were related to: safeguarding, contextual issues (including the impact of the COVID-19 pandemic), staffing/ participant recruitment, financial and fiduciary controls. Safeguarding of staff and participants, delays to planned research activities and the negative impact on budget spend were common and significant risks identified and being mitigated as best possible due to the COVID-19 pandemic; risk registers were reviewed and each updated as required.

In response to COVID-19, NIHR contacted all award holders to ensure safeguarding considerations were paramount for teams and issued guidance on the impact of COVID-19 on research. NIHR ensured continuity of funding to help keep research teams together as research was paused or rescheduled and staff were redeployed to support in-country COVID-19 pandemic responses. NIHR worked closely with award holders to ensure continued support throughout the pandemic by increasing flexibility on changes to programmes while ensuring projects could continue to deliver on their primary objectives. No changes to support delivery of COVID-19 related work in line with the original work programmes were received from Groups Call 2 awards in the reporting period, subsequent requests will be reported on in the Year 3 reports. Where requests were made to re-direct funds to new COVID-19- related research that did not align with the existing aims of the Groups, they were directed to other COVID-19 focussed funding calls.

QSTOX returns (Q4 2019/20) were modified due to the COVID-19 pandemic to include additional data fields to evaluate its impact on GHR research activities. More detailed breakdowns were later requested to understand the impact of staff redeployed to in-country responses were captured. NETSCC set up a central log of key reported risks, programme changes to support COVID-19 work, expected delays to Group programmes, and the impact on spend across partner countries to inform DHSC. This log has been used across all the NIHR Global Health co-ordinating centres.

Table 5. Top five most common, significant risks in terms of impact and likelihood, as reported in the Call 2 Groups Risk Registers

Risk	Examples of risk	How is the risk being managed/mitigated?
Operational – Recruitment (16 entries)	• difficulties or delays in participant recruitment • high attrition of participants • recruitment of staff	Increase project advertisement; additional recruitment sites; over recruit at other sites; create a recruitment/ retention strategy; provide additional training and support; increase communication frequency.
Financial - Budgetary control (16 entries)	• unanticipated costs/delays • delay in the release of funds • funds misappropriated	Regular financial monitoring and reporting; checks of procurement invoices etc; develop finance capacity; support GFGP training and certification; forward planning of expenditure; virement of underspend and changes to programmes
Scientific – Core milestones not met (14 entries)	• delays to the project due to COVID-19 (e.g. travel disruption, continued lockdown, social distancing)	Regular communication to partners and monitoring; utilise virtual meeting to maintain contact; follow local and governmental guidance relating to COVID-19 pandemic; amend timelines and utilise extensions.
Managerial Safeguarding participants, beneficiaries and researcher's general safety and wellbeing (6 entries)	• physical risks (civil unrest, terrorist activities, violence) • lone working • high risk clinical procedures	Adjust programme as required; follow local and governmental guidance; develop SOPs, provide safety training, provide risk assessments; increase communication frequency, provision of appropriate personal protective equipment.
Managerial - Lack of engagement from LMIC partner or stakeholder (5 entries)	• lack of cooperation from collaborating partner • lack of communication from Group • ineffective engagement or commitment	Increase communication frequency; respond to feedback; provide additional support; closely monitor progress; adapt project to address barriers (e.g. alternative investigator, amend protocol, change intervention site)

5.2 Fraud, corruption and bribery. Delivery partner to summarise:

- any changes in the last year to the anti-corruption strategy applied to managing NIHR funded awards

Yes changes. Groups Call 2 awards are contractually required to undertake due diligence on all down-stream partners and establish NIHR vetted collaboration agreements prior to transfer of funds. NIHR encourage the use of Good Financial Grants Practice (GFGP) to assist institutional self-assessment and certification against the GFGP standard. In the period, three awards were approved for financial assurance funds to further strengthen their financial management and assurance capacity (section 3.6).

An assurance visit template was developed and tested in February 2020 when two assurance visits were conducted on partner institutes based in Rwanda and South Africa, Cape Town. No Call 2 Groups partners were assessed during the assurance visits within the reporting period, but the learning will be applied to improve NIHR assurance processes and reported on in the Year 3 annual review for the Call 1 Units and Groups cohort.

Approximately 5% of quarterly financial reports from awards undergo random expenditure verification spot checks of invoices/transactions, and deep dive checks as necessary. In the reporting period, 5 Call 2 Groups awards were spot-checked, some low-cost items on one award were identified and considered to be non-ODA compliant; these costs were subsequently removed by the contractor. A deeper dive review is underway on the 5th Award; the cross NIHR assurance group are aware of this potential risk and the review findings will be reported in the next period. No issues were identified with the remaining 3 Group awards assessed.

Evidence of policies related to finance, procurement, human resources (e.g. codes for staff conduct, recruitment, training, travel and expenses, and conflict of interest policies) are expected to be made available to NIHR on request or as part of local assurance visits. A coordinated approach to ongoing due diligence and assurance of Global Health Research Programme Awards and production of guidance to award holders is under development in the period through a central NIHR Assurance lead and amendments proposed to the current DHSC ODA contract to reflect strengthening of safeguarding and IATI reporting provisions. Where due diligence checks on new partners identify risks, mitigation steps are required. Contractors are expected to undertake an independent audit of partner organisations to verify compliance. Fraud, corruption, and bribery clauses in collaboration agreements are all vetted contractual for compliance by NIHR. During the reporting period, there were no allegations of fraud or financial impropriety made against any of the NIHR Groups. NIHR continues to ensure coherence with other GHR funders and centrally coordinates assurance activities across NIHR to strengthen guidance and support both to internal staff and award holders regarding NIHR expectations for the identification and reporting of Fraud incidents.

5.3 Safeguarding

- Please detail and highlight any changes or improvements you (the delivery partner) have made in the past year to ensure safeguarding policies and processes are in place in your project and your downstream partners.

NETSCC promoted the UKCDR consultation on the International Development Research Funders' statement on Safeguarding at the Units and Groups cohort meeting in May 2019 and used the DfID/FCDO enhanced due diligence for external partners to support the cohort and alert teams to the increased scrutiny in relation to safeguarding. Safeguarding and an NIHR-wide assurance processes and guidance development are being linked to wider GHR funders including DfID/FCDO to ensure a consistent approach is adopted.

The 18 Call 2 Groups with contract variations approved in May 2020 will each contain a new safeguarding provision in their NIHR contracts. NIHR required this change to be reflected in revised downstream collaboration agreements.

The annual reporting templates were revised to include specific questions on safeguarding. Several Groups noted having zero tolerance policies, named safeguarding leads, and continued training and raising awareness with partners on the breadth of responsibilities required through contractual clauses in collaboration agreements.

In the reporting period, the University of Ghana and Lagos were subject to a safeguarding exposé; NIHR immediately investigated any partnerships with the organisations. One Group had partners based at the University of Ghana, in a different faculty department. They provided immediate assurance of their teams safeguarding approach whilst institutional policies and processes within the University of Ghana were further investigated and strengthened. No other specific safeguarding concerns were raised to NIHR during the reporting period.

5.4 Please summarise any activities that have taken place to minimise carbon emissions and impact on the environment across this funding call.

NIHR provide guidance to Groups on expectations related to addressing sustainability within the awards, both in terms of research and capacity strengthening as well as environmental impact. Sustainable environmental solutions are strongly encouraged as part of the NIHR approach to ensuring value for money, for instance using local suppliers and video conferencing. Sustainability questions have been revised in future year's annual reporting to strengthen existing reporting on this.

At the May 2019 cohort meeting, teams demonstrated their awareness of the potential environmental impact of their work, specifically seeking to minimise air travel between partner countries. Teams shared their experiences at the event, and awareness of the NIHR Carbon reduction guidelines and expectations were reinforced. NETSCC through programme guidance expect teams to give full consideration to ways to reduce carbon emissions and lessen environmental impacts through minimising air travel, utilising video conferencing, virtual meetings and technology, use of local suppliers and other effective ways to ensure value for money across the portfolio.

The COVID-19 pandemic has necessitated further innovative solutions to continue work programmes and engagement during periods of severe travel and social restrictions which have significantly reduced environmental impact associated with international travel between partners.

6. Delivery, commercial and financial performance

6.1 Performance of awards on delivery, commercial and financial issues

Groups are closely monitored to ensure projects deliver all the required outputs, adhere to agreed timescales, and minimise potential underspend where possible. As presented in Section 2.2, there are no serious issues affecting delivery with any of the Groups.

The majority of the reported underspends were related to initial start-up delays as described in the previous Annual Review Report. As the Groups have moved into their second year of work, reasons cited for delays include issues such as challenges with transfer of funds to LMIC partners, delays in ethical approvals for studies, delays in recruiting staff members and unexpected contextual challenges.

The average percentage underspend was 32% across all the Call 2 Groups in year 2 -a decrease of 6% from the 38% average underspend reported at the end of year 1. Based on current spend profiles, taking into account the formal extension process and change to programmes described below, modelling predicts this will reach an average 3% underspend by end of year 3. Year 3 estimated spend is based on actual spend for the 2 quarters plus estimated spend for Q3-4 (taken from Q2 returns). Six awards are predicted to deviate by 10% or more (over or underspend). One award is expected to be overspent and how this is being addressed will be covered in the next reporting period. Five others are estimating underspend of between 10-17%.

During the period, all teams took up a formal opportunity to apply for additional time and/or funding, which has resulted in reduction to a predicted 3% underspend described above by Year 3. However, at the time of writing it is uncertain how the pandemic will affect the final picture. In this reporting period, three Groups were successful in obtaining additional funding for FAF **(**see section 3.6 for further details)**.** FAF funds are to be made available only if all financial underspends are used at the end of the project. If underspends remain then the FAF funds awarded will be reduced on a pro-rata basis.

6.2 Have NIHR funded awards continued to meet ODA funding eligibility:

Yes, ODA eligibility of research is closely scrutinised, and any ODA concerns are flagged directly to teams during active monitoring. Award holders provide a full justification for any proposed changes to programmes and the ODA eligibility of research plans. Should NETSCC identify any concerns, these are raised with the teams and revisions to the proposed activities are required should they not meet ODA eligibility criteria. Teams are advised to remove in-eligible components and to seek alternative funding sources for any non-ODA eligible elements identified.

6.3 Transparency - this question applies to funding schemes which include transparency obligations within their contracts.

- Delivery partner to confirm whether or not International Aid Transparency Initiative (IATI) obligations have been met (please refer to https://iatistandard.org/en/iati-standard/). Yes/No

- If these are not yet met, please outline the reasons why.

Yes. DHSC reports relevant transparency data relating to the NIHR Global Health Research Groups to the Independent Aid Transparency Initiative (IATI) registry on a quarterly basis, as part of the Department's commitment to aid transparency in compliance with the IATI standard.

All funding call guidance and outcomes are published on the NIHR website and full details of the research funded are available on the NIHR funding and awards and NIHR open data platform.

The Call 2 Groups did not initially have a contractual obligation to meet the IATI standard by reporting data relating to ODA funding to the IATI registry, although new clauses around requirements for Contracting Institutions to report to IATI were introduced for the majority of teams where they were successful in bidding for Costed or No Cost Extensions in May 2020. The clause therefore came into effect from Spring 2020 for all awards undergoing contract variations. Prior to this, NIHR engaged the Groups at the 2019 cohort event highlighting the importance of transparency of ODA funding and encouraged them to have discussions within their contracting institutions to prepare them for the new contractual obligations to report to IATI within six months of the contractual change. NIHR will work with teams to support institutional adoption of reporting requirements within the lifetime of the awards.

7. Monitoring, evaluation and learning

7.1 Award level progress monitoring

NETSCC are in regular contact with teams and attend independent Advisory Group meetings by video conference or face-to-face where feasible; invites are also extended to DHSC colleagues. Regular communication with the cohort of Group Directors, Research and Finance Managers is maintained via the SLACK platform and email. NETSCC staff attend meetings such as conferences, workshops and stakeholder engagement events either in person or remotely, balancing environmental considerations.

The NETSCC document project issues on the MIS which are reviewed at the monthly Programme Management Meetings with DHSC. Sources of information and data captured include:

Per project:

- financial reports (quarterly)
- monitoring reports (6 monthly/annual/interim)
- trainee data reports (annually)
- independent Strategic Advisory Group meetings/ minutes
- evidence of due diligence and ethics approvals
- project outputs
- email correspondence

Programme level:

- directors and project manager cohort meeting outputs
- SLACK GHR U/G community engagement channel
- site visits and in-country assurance visits to multiple partners

NETSCC actively monitors all projects across a number of areas, including but not limited to; progress against milestones, spend in relation to forecast, capacity strengthening activities, assurance and due diligence of downstream partners. Project risks are assessed for the duration of contracts to enable appropriate support to be provided to teams to mitigate any impact on the overall delivery. Where significant concerns are identified, NETSCC works with DHSC in line with the NIHR Global Health Research Programme Escalation Policy.

Group Annual Reports provide detailed information on progress and allow in depth monitoring against contractual milestones and deliverables. They also provide key information on community engagement, equity of partnerships, capacity strengthening, outputs and outcomes. They are used for monitoring risks and mitigations, and for ensuring effective governance, assurance and compliance. The Annual Reports also invite funded teams to give their feedback to NETSCC on areas for programme strengthening which ensures two-way learning. Depending on their complexity, reports are reviewed by at least

two members of the NETSCC team. Following review, response letters are sent to project Directors highlighting the notable achievements and where further information is required.

Financial monitoring

Groups are required to submit a quarterly statement of expenditure which includes accurate spend to date, forecasts and details of any required budget amendments. The finance team spot checks receipts for purchases and requires evidence that due diligence checks have been completed for all institutions in receipt of ODA funds. A final financial reconciliation will be required within three months of completion of the project.

7.2 Evaluation

The monitoring, evaluation and learning approach for the cohort is being developed closely with DHSC and is aligned to the agreed results framework developed with DHSC and other NIHR Coordinating Centres. This approach will inform future annual reporting and data collection templates, ensuring templates, reporting and data capture processes take account of stakeholders' needs and requirements for transparency of ODA funding.

To navigate the challenging times ahead brought about by the COVID-19 pandemic, an evaluation exercise was carried out in April as part of the quarterly QSTOX financial reporting process. The evaluation aimed to help NIHR to understand and act to help funded teams during this constantly evolving and unprecedented health crisis. The information the teams were asked to provide included the following:

- anticipated delays in months per work package
- description of how the pandemic is affecting delivery of the work packages
- affected partner organisations
- potential request for no cost extension and for how long
- potential request for costed extension
- options for team to shift research activities to achieve original objectives
- plans to request change to programme to include COVID-19 related research related to the original aims
- request to undertake COVID-19 work

The results were collated and helped to inform NIHR where the teams were being impacted and how they could be best supported. The findings are also shared on the NIHR Hub for cross-centre learning.

7.3 Learning

Examples of how learning from the NETSCC monitoring approach has helped with programme improvements include:

- modifying and clarifying NIHR guidance to funded teams
- informing content for new funding calls
- identifying more streamlined and efficient way to capture data
- informing considerations for the future assurance visits process

NIHR encourages funded Groups to learn from one another through their research collaborations and by the sharing of research experiences. Mechanisms through which this is achieved include webinars, cohort meetings and SLACK. In May 2019, NETSCC ran a three-day networking event in Birmingham for the Directors and Project/Finance Managers of the current funded cohort of 13 Units and 40 Groups. The learning from the 2019 event was summarised into a cohort meeting report which was disseminated to all participants.

NIHR Global Health Research webinars are a key NETSCC engagement tool: through using this approach, NIHR creates spaces for dialogue that can engage a global audience and save substantial travelling time and expense, as well as encourage equitable participation. In December 2019, NETSCC hosted a well-attended webinar on finance and project management, which attracted 80 participants. Separately NETSCC delivered presentations at other face to face events including a Finance Managers workshop in Cambridge in September 2019, hosted by an NIHR Global Health Research award-holder.

- What are the key lessons identified over the past year that have not already been covered above for this funding scheme? What worked well and what did not? Where something was not successful what lessons have been learned?

This section summarises portfolio learning from monitoring activities and cohort events since the start of the Groups contracts:

Collaboration Agreements learning points include:

- NIHR sharing an approved collaboration agreement template(s) would lessen the time taken by the teams to draft an acceptable agreement.
- the NIHR position that IP ownership should initially rest with the main contractor is not considered by all partners to fully promote equitable partnerships, and where appropriate changes in ownership are supported by NIHR. Examples of where an equitable split has worked well would be valued given the optics for partners.

Data Governance learning points include:

- harmonisation of data collection across study sites and in-country data processing helps to build the capacity of the researchers in LMIC environments.
- data management challenges in clinical research may be minimised by using REDCap as it is highly secure and intuitive to use. Alternatively, data should be stored within institutional repositories to increase security.

Ethics process learning points include:

- understanding the requirements for ethics approval, regulatory approval, governance and sponsorship issues in different LMIC contexts at the start of the programme can minimise project start-up delays.
- challenges may be further minimised through (i) training to support capacity for setting up international research studies (ii) good communication and sharing best practice with other Groups and Units.

Partner and project management learning points include:

- partner relationships require a dedicated project manager to ensure robust quality systems, coordinate regular project management meetings, communications and monitor progress. In-country project managers help to keep programmes running well.
- active monitoring through onsite staff, site visits and dialogue with project officers/managers aids understanding of contextual issues and shared understanding of the needs to be addressed.
- consider the potential for political and environmental instability in LMIC contexts and identify cultural barriers.

Language and Communications learning points include:

- creation of networks of early career researchers to engage with their peers and to develop their language and communication skills.
- Zoom is the most recommended platform for remote meetings where robust audio is vital; WhatsApp is useful for day-to-day team connectivity.
- Access to English language training for LMIC colleagues/students may be needed to help them fulfil their potential and effective participation in the research projects.

Community Engagement and Involvement (CEI) and stakeholder engagement learning points include:

- engaging with all stakeholders including, policy-makers, academics, clinicians, patients, carers, and community members and leaders throughout the research process to support local impact.
- improving the understanding of the local context and familiarity with the CEI concept to increase the chances of the project being successful in LMICs.

Financial management learning points include:

- transfer of funds to partners can be challenging and appointing a dedicated finance officer in some teams have helped.
- budget forecasting can be difficult and project partners need to be trained adequately
- UK institutions pre-financing LMIC partners - at their own risk can help reduce delays in recruitment and start up.
- delays in recruitment of staff leads to accumulation of underspend on salaries and there is need for teams to raise underspend reallocation with NIHR well in advance via a formal NIHR change to programme process.
- appointing a liaison officer improves communication and facilitates compliance with financial procedures.
- finance and project management webinars provided an opportunity for teams to network with other teams and to ask questions on a range of project management and financial matters.

7.4 Key milestones/deliverables for the awards for the coming year

Projects have set their milestones for the next 12-month reporting period in their Annual Reports. Contractual milestones are (i) to continue to complete their quarterly financial and Annual Reports, (ii) deliver on outstanding deliverables, and (iii) work towards funded outcomes. Key to success is demonstrating the impact of ODA funding in addressing priorities for research and capacity building in LMICs and in influencing policy and practice through effective stakeholder engagement ahead of contract end dates.

Assurance and risk management processes are continuing to develop and are incorporating learning from FCDO and UKRI. In February 2020, in-country assurance visits were made to Rwanda and South Africa, to provide opportunities for reviewing in-country partner progress and equity of relationships with the UK, testing NIHR assurance templates to assess policies and the compliance with DHSC contractual terms. In-country presentations given by NIHR staff, and feedback was sought to inform shared learning and best practice. Learning from assurance visits has been collated and key points to inform development of best practice and improved guidance is captured in Groups Call 1 year 3 report.

7.5 Other comments/feedback/issues to flag to NIHR/DHSC

The key lessons picked up from the Call 2 Groups annual reports, which NIHR may wish to take into consideration in similar future programmes, are summarised as follows:

- NIHR should provide collaboration agreement templates which teams could use to lessen the time teams spend in drafting agreements with their partners.
- the starting position for IP ownership resting with the UK lead institution is deemed unequitable by partners in LMICs. On a case-by-case basis shared agreements are increasingly being requested
- the £50K funding cap in the first 6 months and the stop/go point led to uncertainty and contributed to project delays
- the teams valued NIHR information webinars e.g. on project and financial management and welcome further opportunities to engage with these, as well as face-to-face events which have been very well received.
- new NIHR funding opportunities should be communicated to the cohort of Trainees to raise awareness of larger grants they could consider applying for., SLACK, the information messaging platform hosted by NIHR, is a useful space for knowledge exchange and collaboration between GHR Units and Groups. SLACK has been useful particularly at establishing initial connections between teams

Annex A. Risk and Finance update

Internal only

Table A1 lists all Group Call 2 awards together with an assessment of whether their overall progress is on track in relation to milestones and deliverables, including any known operational issues, delays due to COVID-19, consideration of underspend, assessment of how communicative teams are and the mitigating actions in response to risk identified. A standard traffic light rating (red, amber, green) has been applied. There are no serious issues (i.e. no red ratings) with any of the awards. Three awards are amber rated due to anticipated further delays to work packages despite extensions. Each individual overall Project Risk rating is made in relation to project delivery, issues and responsiveness and Financial risk (% risk of underspend) and mitigating actions in response to risk identified. Refer to section 2.2 in relation to overall progress shown in Table A1. Finance rating is green unless otherwise stated.

Table A1. Overall risk rating for each project in the active portfolio within the reporting period

Award	Award ID	Current RAG status (progress on milestones & deliverables)	Details/ Potential impact/ Mitigation
Norman	17/63/08	Green Finance (Amber)	N/A - On track with approved 3-month no cost extension (NCE) /Costed 12-month extension
Singh	17/63/20	Green/Amber Finance (Amber)	Delays due to new partner setup and COVID-19. Team will request a further extension when available.
Anumba	17/63/26	Green/Amber	COVID-19 delays. Extension may be requested when available.
McIntosh	17/63/35	Green/Amber	Short term milestones and majority of medium-term milestones and impacts on track. However, experienced COVID-19 delays and a further extension may be requested when available.
Grigg	17/63/38	Green/Amber	COVID-19 delays. Further extension may be requested when available.
Rylance-Jacob	17/63/42	Green	N/A - On track with approved NCE/Costed 12-month extension
Osrin	17/63/47	Green	N/A - On track with approved NCE/Costed 12-month extension
Cooper	17/63/62	Amber Finance (Amber)	Initial recruitment delays and then COVID-19 delays. Approved 12-month NCE which will help address initial delays. Changes to the design and objectives may be needed due to COVID-19. Team may request a further extension when available
Sackley	17/63/66	Amber Finance (Amber)	Approved 12-month NCE extension has helped team to progress following initial delays. Delay to nurse-led intervention (WP5).
Siddiqui	17/63/76	Green	Start-up delays. Anticipated aims and activities will be completed within approved 12-month NCE timeframe.
Nokes	17/63/82	Green	COVID-19 delays but anticipated to complete within approved 12-month NCE/ costed extension.

Kwiatkowski	17/63/91	Green/Amber	COVID-19 delays. Extension may be requested when available.
Solomon	17/63/110	Green Finance (Amber)	N/A - On track with approved NCE/Costed 12-month extension
Lip	17/63/121	Green/Amber Finance (Amber)	COVID-19 delays. Further extension may be requested when available.
Feder	17/63/125	Green	COVID-19 delays but anticipated to complete within approved 6-month extension
Gilbody	17/63/130	Green/Amber	COVID-19 delays. Further extension may be requested when available.
Hattersley	17/63/131	Green/Amber	COVID-19 delays. Further extension may be requested when available.
Satterthwaite	17/63/145	Amber	COVID-19 delays and some issues with timely QSTOX reporting and adequate detail within annual reports. Approved a 6-month NCE.
Ward	17/63/154	Green	Some COVID-19 delays but on track to deliver overall aims within costed extension timeframe.
Pope	17/63/155	Green	N/A - Approved 12-month costed extension.

Global distribution of commitments for Call 2 Groups awards in LMICs

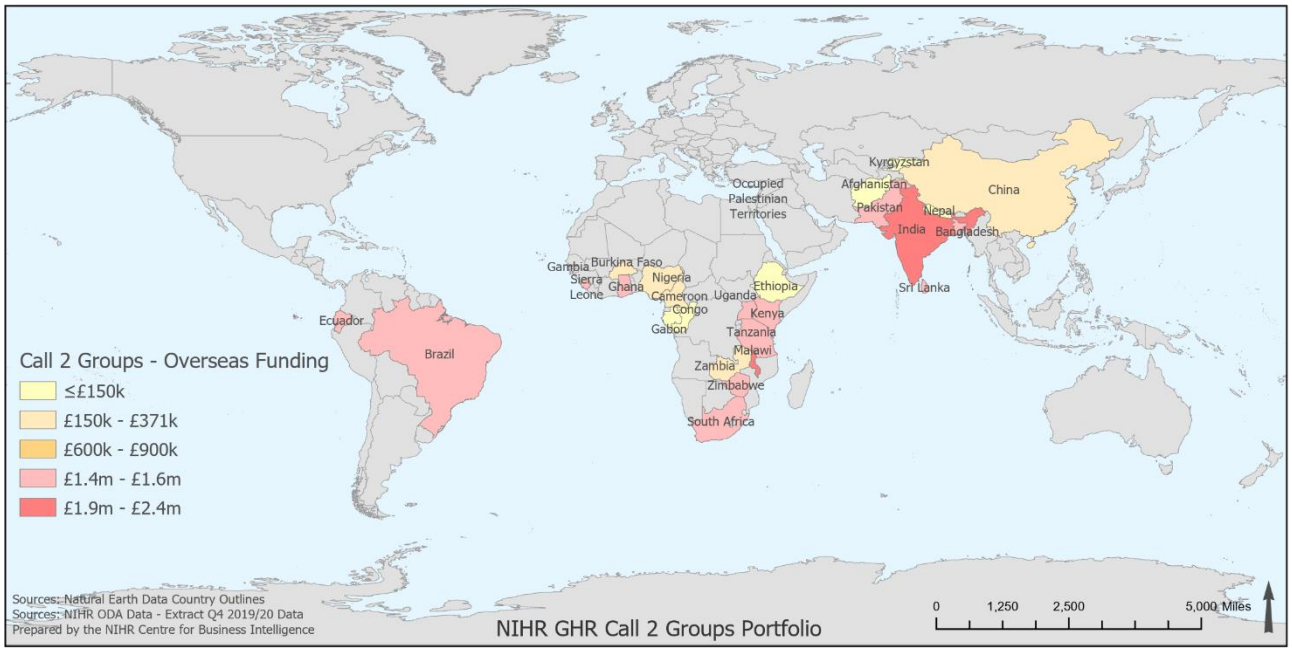

Figure A1. Heap Map showing geographic spread and combined value of Groups Call 2 awards committed to LMIC partners.

Figure A1 displays the quantity of funding in pounds (£) distributed globally across the Call 2 Groups partnerships. India receives the greatest proportion of funding (£2.4m), whilst Congo, Ethiopia, Afghanistan, and Gabon receive lower amounts (≤£150k each). Non-LMICs are not shown (included Norway). Non-LMICs were eligible to apply as co-applicants and collaborators provided ODA eligibility criteria were met overall, there was clear

justification for their involvement, and that the resources/expertise could not be found within LMICs.

The highest concentration of LMIC partnership budgets can be found in India and Malawi. A total of £19.1m is directed to UK institutions and non-LMIC countries, and a total of £19.7m committed funding is directed to LMICs (ranging from £3k in Congo to £2.4m in India). Of the entire £38.8m commitment, LMIC partners in Call 2 Groups are in receipt of 51% of ODA funding and UK and non-LMICs in receipt of 49% of funding.

Table A2. Aggregated HIC/LMIC spend across all awards

	Total committed amount (GBP) allocated to:	**% of total committed amount to all institutions:**
UK/HIC institutions	£19,126,081	49%
LMIC institutions	£19,705,651	51%
All institutions	£38,831,733	100%

Table A3. Table of partners (including lead institution and downstream partners) and contracted amounts

Award	**Institution Name**	**Country**	**Total Contracted Amount (GBP)**
17/63/08	University of Edinburgh	UK	£557,247
	Borders General Hospital	UK	£22,906
	Lusaka Apex Medical University and Levy Mwanawasa Teaching hospital	Zambia	£307,092
	Malawi Epidemiology and Intervention Research Unit (MEIRU)	Malawi	£562,153
	Malawi Liverpool Wellcome Trust (MLW)	Malawi	£429,230
	Napier University	UK	£20,564
	University of Glasgow	UK	£41,902
17/63/110	University of Liverpool	UK	£1,060,407
	FioCruz	Brazil	£202,909
	Christian Medical College	India	£208,100
	Liverpool School of Tropical Medicine	UK	£52,583
	Malawi Liverpool Wellcome Trust (MLW)	Malawi	£203,390
	National Institute of Mental Health and Neurosciences (NIMHANS)	India	£203,174
	The Encephalitis Society	UK	£8,518
	University of Malawi College of Medicine	Malawi	£42,435
	University of Warwick	UK	£18,483
17/63/121	University of Birmingham	UK	£1,022,157
	Chinese General Hospital	China	£65,000
	Faculty of Medicine Foundation, University of Sao Paolo	Brazil	£332,400
	NCIS	Sri Lanka	£102,810
	Shanxi Dayi Hospital	China	£214,300
	University of Jaffna	Sri Lanka	£190,226
17/63/125	University of Bristol	UK	£921,966
	An Najah National University	Occupied Palestinian Territories	£192,145
	Kathmandu University	Nepal	£145,832
	London School of Hygiene & Tropical Medicine	UK	£255,405
	South Asian Clinical Toxicology Research Collaboration	Sri Lanka	£135,900
	University of Sao Paolo	Brazil	£162,445
17/63/130	University of York	UK	£747,995

	Ark Foundation	Bangladesh	£305,014
	International Centre for Diarrhoeal Disease Research Bangladesh (ICDDR,B)	Bangladesh	£82,231
	King's College London	UK	£8,070
	London School of Economics	UK	£19,820
	National Institute of Mental Health and Neurosciences (NIMHANS)	India	£362,495
	Rawalpindi Medical University/Institute of Psychiatry	Pakistan	£405,609
	University of Dundee	UK	£16,445
	University of Leeds	UK	£28,646
	University of Southampton	UK	£9,471
	University of Sussex	UK	£13,881
17/63/131	University of Exeter	UK	£1,095,073
	MRC / UVRI Uganda Research Unit	Uganda	£743,825
	University of Yaounde	Cameroon	£158,853
17/63/145	International Institute for Environment and Development	UK	£380,763
	Training and Resource Centre	Zimbabwe	£336,170
	University of Warwick	UK	£50,960
	Urban Health Resource Centre	India	£639,847
	Zimbabwe Congress of Trade Unions/ Zimbabwe Chamber of Informal Economy Associations	Zimbabwe	£120,880
17/63/154	University of Southampton	UK	£873,067
	Clinical Research Group Nanoro	Burkina Faso	£284,725
	Navrongo Health Research Centre	Ghana	£300,030
	University of the Witwatersrand	South Africa	£369,324
17/63/155	University of Liverpool	UK	£1,242,072
	CICERO	Norway	£20,228
	Douala General Hospital	Cameroon	£208,233
	Kintampo Health Research Centre	Ghana	£246,464
	Moi University	Kenya	£241,096
	University of Ghana	Ghana	£34,655
17/63/20	University of Leicester	UK	£918,249
	Chest Research Foundation	India	£276,416
	Makerere University	Uganda	£158,481
	National Centre of Cardiology & Internal Medicine	Kyrgyzstan	£132,430
	University College London	UK	£10,014
	University of Plymouth	UK	£93,420
	University of Sheffield	UK	£21,219
	University of Sri Jayewardenepura	Sri Lanka	£244,424
17/63/26	University of Sheffield	UK	£1,425,535
	International Centre for Diarrhoeal Disease Research Bangladesh (ICDDR,B)	Bangladesh	£261,893
	Sheffield Children's NHS Foundation Trust	UK	£9,942
	Sheffield Teaching Hospital	UK	£7,500
	University of Cape Town	South Africa	£275,251
17/63/35	The University Court of the University of Glasgow	UK	£1,104,566
	Kilimanjaro Christian Medical College KCMC	Tanzania	£136,659
	Kilimanjaro Clinical Research Institute	Tanzania	£701,253
	Northumbria Healthcare NHS	UK	£51,457
17/63/38	Barts & The London Queen Mary's School of Medicine & Dentistry	UK	£734,263
	Kwame Nkrumah University of Science and Technology (KNUST)	Ghana	£218,746
	Lagos State University College of Medicine	Nigeria	£225,192
	Makerere University	Uganda	£214,444
	Malawi Liverpool Wellcome Trust (MLW)	Malawi	£222,869
	University of KwaZulu-Natal	South Africa	£219,553
	University of Zimbabwe	Zimbabwe	£163,441
17/63/42	Liverpool School of Tropical Medicine	UK	£672,246
	Addis Ababa University	Ethiopia	£5,900
	African Institute for Development Policy (AFIDEP)	Kenya	£201,395
	Catholic University of Bukavu	Congo	£3,000
	CERMEL	Gabon	£146,957
	Connaught University	Sierra Leone	£3,000
	Douala General Hospital	Cameroon	£3,000
	Global Sepsis Alliance	UK	£42,273

	Innovation Streams	Uganda	£51,989
	Komfo Anokye Teaching	Ghana	£3,000
	Malawi Liverpool Wellcome Trust (MLW)	UK	£436,858
	Souro Sanou Teaching Hospital	Malawi	£3,000
	University of Nigeria Teaching Hospital	Burkina Faso	£3,000
	University of Birmingham	Nigeria	£12,193
	University of Warwick	UK	£22,863
	Walimu	Uganda	£360,219
	Worldwide Radiology	UK	£25,391
17/63/47	UCL Institute of Child Health	UK	£1,007,363
	HAWCA	Afghanistan	£49,668
	King's College London	UK	£236,723
	London School of Hygiene & Tropical Medicine	UK	£184,750
	Sangath	India	£145,057
	SNEHA	India	£149,810
	St George's, University of London	UK	£34,972
	University of Colombo	Sri Lanka	£151,130
	University of Nottingham	UK	£31,761
17/63/62	St George's, University of London	UK	£434,156
	Federal University of Bahia	Brazil	£766,644
	Universidad Internacional del Ecuador	Ecuador	£764,567
	University of East Anglia	UK	£34,252
17/63/66	King's College London	UK	£1,177,616
	College of Medicine and Allied Health Sciences (COMAHS)	Sierra Leone	£139,955
	Guy's and St Thomas Foundation Trust	UK	£3,371
	King's Sierra Leone Partnership	Sierra Leone	£650,021
	University of Central Lancashire	UK	£10,541
	University of Glasgow	UK	£10,805
17/63/76	University of York	UK	£731,188
	Aga Khan University	Pakistan	£190,910
	Ark Foundation	Bangladesh	£244,270
	Brunel University	UK	£23,802
	HRIDAY	India	£64,761
	Khyber Medical University	Pakistan	£173,689
	King's College London	UK	£58,363
	Maulana Azad Medical College	India	£173,237
	National Institute of Cancer Prevention and Research	India	£208,273
	University of Edinburgh	UK	£61,845
	University of Stirling	UK	£5,366
	University of Warwick	UK	£64,293
17/63/82	University of Warwick	UK	£782,099
	KEMRI	Kenya	£1,133,890
	Kilimanjaro Clinical Research Institute	Tanzania	£47,190
	UVRI - Uganda Virus Research Institute	Uganda	£35,090
17/63/91	Wellcome Trust Sanger Institute	UK	£593,054
	Medical Research Council Unit (MRCG)	Gambia	£671,685
	University of Ghana	Ghana	£734,440

Table A4 presents the actual year 1 percentage (%) underspend, year 2 (%) underspend. This is the variance between predicted budget spend reported in Q1 QSTOX for FY 2 and the actual spend Table A5 is the predicted underspend in year 3 and budget in year 4 dependent on award duration, and in light of approved extensions. ***Year 3 estimated spend is based on actual spend for the 2 quarters plus estimated spend for Q3-4 (taken from Q2 returns). All projects are predicted to have an average 3% (-12-17% range) underspend by end of year 3 (data as of Q2 September 2020). The reason for delays, changes to programmes, virements and costed or no cost extensions approved to mitigate underspend are indicated.

Table A4. Financial report of planned versus actual spend for Call 2 Groups year 1 and 2

Project No	**Y1 budget -** as per first QSTOX 2018/19 Q3	**Y1 Actual Spend (QSTOX)**	**Y1 Variance**	**Y1 % under-spend**	**Y2 budget** - as per Y2 Q1 return	**Y2 Actual Spend**	**Y2 Variance**	**Y2 % under-spend**	**Explanation / Mitigating Actions**
17/63/08	£384,394	£221,673	£162,721	42%	£825,664	£380,502	£445,162	54%	Budget reprofiled Jun 2020 when 3mth NCE awarded due to delays: contracting and ethics, and the retirement/change of a PI
17/63/20	£504,220	£176,164	£328,055	65%	£834,364	£421,841	£412,523	49%	Budget reprofiled Jun 2020 when 12mth NCE awarded due to delays: 6mth stop/go review, ethics, Indian partner moving institutions, Sri Lanka terrorist attack, and COVID-19. CTP Sep 2020: Repurposed £5k from travel/ consumables budget to cover the VAT required for development of a rehab app.
17/63/26	£362,589	£341,955	£20,634	6%	£847,473	£685,738	£161,736	19%	Budget reprofiled Jun 2020 when 10mth NCE awarded due to delays: with recruiting project staff (in part due to the £50k spending cap and 6mth stop/go review) and with ethics.
17/63/35	£450,850	£242,561	£208,289	46%	£891,306	£710,889	£180,417	20%	Budget reprofiled Jun 2020 when 12mth NCE awarded due to delays: with the 6mth stop/go review (impacted on staff recruitment and transfer of funds) and impact of COVID-19.
17/63/38	£453,914	£383,605	£70,309	15%	£719,409	£601,482	£117,927	16%	- Budget reprofiled Jun 2020 when 12mth NCE awarded due to delays: ethics and trial set-up, increased number of focus groups and qualitative analysis, and impact of COVID-19. - CTP Jun 2020: Vired £104,444 from staffing underspend to UK other directs for training, travel to group meetings, equipment, and development of digital data platform.

17/63/42	£403,047	£241,007	£162,040	40%	£988,749	£702,167	£286,582	29%	Budget reprofiled Jun 2020 when 12mth NCE awarded due to slow participant recruitment, and impact of COVID-19.
17/63/47	£232,976	£149,407	£83,569	36%	£779,457	£652,987	£126,471	16%	- Budget reprofiled Jun 2020 when 12mth NCE awarded due to delays: with contracting, various issues in Sri Lanka, and anticipated impact of COVID-19. - CTP Dec 2019: Vired £12k from UCL to LSHTM for travel for ECR, and £30k non-staff costs from UCL to Colombo to bring their budget in-line with other LMICs. - CTP Aug 2020: Vired £24,442 salary costs from LSHTM to UCL. Underspend due to recruitment delay, as UCL recruitment process was faster and more straightforward.
17/63/62	£553,588	£310,191	£243,397	44%	£959,414	£491,039	£468,375	49%	Budget reprofiled Jun 2020 when 12mth NCE awarded due to delays: with ethics and collaboration agreements, and slow participant recruitment.
17/63/66	£473,703	£124,766	£348,937	74%	£1,003,907	£485,163	£518,745	52%	Significant challenges during project set up including senior team illness. 12 mth NCE approved to use underspend and address delays (separate to Groups call for extensions)
17/63/76	£343,996	£252,498	£91,498	27%	£869,899	£687,965	£181,935	21%	- Budget reprofiled Jun 2020 when 12mth NCE awarded due to delays: gaining approvals, plus anticipated participant recruitment delays due to Ramadan and COVID-19. - CTP Jan 2020: NICPR viring £54,424 from salaries and other budget headings to enable purchase of Nicotine Replacement Therapy and other trial costs.
17/63/82	£192,932	£151,500	£41,431	21%	£950,412	£642,898	£307,514	32%	Budget reprofiled Jun 2020 when 6mth NCE awarded due to delays: 6mth stop/go on staff recruitment, procurement, MOUs and anticipated impact of COVID-19.
17/63/91	£616,913	£211,956	£404,957	66%	£914,721	£590,150	£324,571	35%	Budget reprofiled Mar 2020 when 12mth NCE awarded due to delays: undertaking GFGP assessments, which then delayed collaboration agreements, transfer of funds, and procurement.
17/63/110	£286,038	£211,926	£74,112	26%	£907,720	£396,075	£511,645	56%	- Staffing delays in first 12 mths. Delays to ethics approvals and collaboration agreements (CA) reported in Y2. Budget reprofiled Jun 2020 when 12mth NCE awarded due to delays

									with ethics approval/CA. Majority of project spend due to take place in Y 2/3.
17/63/121	£318,434	£160,746	£157,688	50%	£822,283	£367,420	£454,863	55%	Budget reprofiled Jun 2020 when 12mth NCE awarded due to delays: 6mth stop/go, delays transferring funds following the Sri Lanka terrorist attacks, delays signing collaboration agreement with China partner, and anticipated impact of COVID-19.
17/63/125	£299,330	£147,036	£152,294	51%	£923,182	£635,064	£288,118	31%	Budget reprofiled Jun 2020 when 6mth NCE awarded due to delays: contracting, various country-specific issues, and anticipated impact of COVID-19.
17/63/130	£352,549	£262,545	£90,004	26%	£861,525	£581,232	£280,293	33%	Budget reprofiled Mar 2020 when 12mth NCE awarded due to delays: ethics, transfer of funds, and staff recruitment.
17/63/131	£105,548	£91,827	£13,721	13%	£1,042,994	£684,175	£358,819	34%	Budget reprofiled Jun 2020 when 12mth NCE awarded due to delays: contracting. CTP Apr 2020: Virement of funds from 'staff costs' to 'non-staff costs' to cover YODA trial costs e.g. staff and general study costs.
17/63/145	£413,252	£256,380	£156,872	38%	£638,485	£488,685	£149,800	23%	Budget reprofiled Jun 2020 when 6mth NCE awarded due to delays: 6mth stop/go, some country-specific issues, partner capacity constraints, staff turnover/ availability issues, ethics, and translation of survey.
17/63/154	£413,420	£350,498	£62,922	15%	£708,599	£632,034	£76,564	11%	CTP Jan 2020: Transferred part of the research costs budget (non-staff) from each site (£17,500 per site) to pay PRICELESS to help with the development of the CHAT tool for each site.
17/63/155	£428,746	£409,356	£19,390	5%	£896,644	£940,720	-£44,076	-5%**	n/a
Total	**£7,590,439**	**£4,697,598**	**£2,892,841**	**38%**	**£17,386,208**	**£11,778,226**	**£5,607,982**	**32%**	

*Table A5. Financial report of planned versus actual spend for Call 2 Groups year 3 and 4 dependent on award duration. ***Year 3 estimated spend is based on= actual spend for the 2 quarters plus estimated spend for Q3-4 (taken from Q2 returns)*

Project No	Y 3 budget as per Y3 Q1 return	Y3 estimated spend***	Variance	% under/(over) spend Y 3	Y 4 budget as per Y3 Q2 return
17/63/08	£1,159,904	£1,159,904	£0	0%	£678,320
17/63/20	£670,101	£622,900	£47,201	7%	£1,132,784
17/63/26	£889,195	£750,743	£138,452	16%	£701,677
17/63/35	£683,355	£768,667	-£85,312	-12%	£771,157
17/63/38	£574,076	£498,808	£75,268	13%	£1,014,613
17/63/42	£895,205	£888,954	£6,251	1%	£664,070
17/63/47	£779,255	£701,275	£77,980	10%	£924,491
17/63/62	£540,005	£543,716	-£3,712	-1%	£654,673
17/63/66	£492,232	£511,021	-£18,789	-4%	£871,359
17/63/76	£664,283	£669,148	-£4,865	-1%	£390,388
17/63/82	£1,120,424	£1,111,137	£9,288	1%	£588,733
17/63/91	£732,253	£608,958	£123,296	17%	£588,115
17/63/110	£867,141	£848,824	£18,317	2%	£543,175
17/63/121	£721,998	£782,458	-£60,460	-8%	£616,269
17/63/125	£786,267	£709,859	£76,408	10%	£783,891
17/63/130	£738,739	£730,594	£8,145	1%	£924,264
17/63/131	£904,604	£916,007	-£11,403	-1%	£805,629
17/63/145	£501,151	£484,148	£17,003	3%	£299,407
17/63/154	£708,534	£688,228	£20,306	3%	£656,385
17/63/155	£667,885	£669,744	-£1,860	0%	£474,205
Total	**£15,096,606**	**£14,665,092**	**£431,515**	**3%**	**£14,083,605**

Annex B. Delivery chain map Internal only

Each Group was asked to provide a Delivery Chain Map indicating the flow of funds from the UK to all partners and subcontractors, to the named work package leads– no consistent format for these was defined from the outset of the awards by NETSCC. Data on delivery chain map funding disbursements to all down-stream partners are captured as part of QSTOX returns.

The delivery chain map information is recorded on the standardised Excel template and attached to this report. The information captured is based on data from the NETSCC Finance records and includes committed amounts and amounts disbursed to the partners by the end of the reporting period.

Table B1. Delivery Chain Map indicating the flow of funds from the UK to all partners and subcontractors, to the named work package leads (Attached as a separate Excel spreadsheet)

Annex C. Additional Funding Awards secured by Groups partners and percentage allocated to LMICs (where known)

Internal only

Table C1. A summary of additional award amounts secured by partners indicating the percentage of award going to LMIC partners where known.

Award	Funding Awarded For	Funding source	Amount (GBP)	Lead institution name and country	% allocated to LMIC partners	HRCS code
17/63/35	Bursaries for two Tanzanian doctors to attend the BSR Foundation Course in Ultrasonography in Europe in 2020	British Society of Rheumatology	Unknown	Tanzania		
17/63/42	Understanding drivers of antimicrobial resistance among mothers and children in Uganda (DRUM+)	Grand Challenges Africa	£78,482	Infectious Diseases Institute, Nigeria		
17/63/47	Exploring associations between dating violence and mental health among young people in India	International Centre of Goa	£2,634	Sangath, India	100%	
17/63/47	One Stop Centre at KEM hospital to respond to violence against women and children	Dep. of Women and Child Dev., Gov. of Maharashtra	£23,185	SNEHA India	100%	
17/63/47	Strengthening the health system's response to violence against women and children	Oracle, India	£43,209	SNEHA India	100%	
17/63/47	Men against violence: A pilot implementation study of a male-led community program to address gender-based violence in rural Rajasthan, India	Harvard Medical School Center for Global Health Delivery–Dubai	£44,089	Sangath, India		
17/63/47	Health system response to survivors of violence	Oracle, India	£42,000	SNEHA India		
17/63/47	IMPlementation of evidence-based facility and community interventions to reduce the treatment gap for depRESSion	National Institute of Mental Health (NIMH)	£1,731,441	Sangath, India		
17/63/47	Bridging the human resource gap: developing a lay-counsellor workforce to address perinatal mental health in rural Rajasthan	Shastri Indo Canadian Initiative	£70,309	Sangath, India		
17/63/47	Ms Bhatia offered a full-time funded PhD Research Studentship in the Faculty of Health and Life Sciences at Oxford Brookes University, UK	Global Challenges Research Studentship	£89, 631	Sangath, India		
17/63/47	Gender Matters: intersecting domestic violence and mental health	Azim Premji Philanthropic Initiatives	£636,410	SNEHA India		
17/63/47	Institutional healthcare response to violence against women and children	Oracle, India	£46,762	SNEHA India		
17/63/47	Addressing gender-based violence in informal urban settlements; the convergence model - sensitizing the law enforcement system	Manan Trust	£171,975	SNEHA India		
17/63/47	Exploring narrative storytelling as mental health support for women experiencing gender-based violence in high prevalence settings	AHRC/MRC Global Public Health Partnerships grant	£191,000	HAWCA, Afghanistan and UCL, UK		

17/63/62	Evaluation of Immunogenetic Factors Associated With Failure of Therapeutic Response in Asthma	CNPq in Brazil	£89,364	Universidade Federal da Bahia, Brazil	100%	
17/63/62	Relationship between inequalities and innovation in health: focus on quality-equity and critical technological competencies in the Brazilian Unified Health System (SUS)	Brazilian National Research Council	£183,820	Universidade Federal da Bahia, Brazil	100%	
17/63/62	Evaluation of the scientific, technological and institutional impact of the decentralized investments carried out within the scope of the Research Program for the SUS for the period 2004 to 2018	CNPq in Brazil	£339,360	Universidade Federal da Bahia, Brazil	100%	
17/63/62	Methylation patterns associated with allergic diseases in Ecuadorian children	Universidad del Azuay	£36,462	Universidad de Azuay, Ecuador	100%	
17/63/66	PhD funding for Seble Shewangizaw	African Mental Health Research Initiative	Unknown	Addis Ababa University, Ethiopia	100%	
17/63/82	Building capacity for whole genome sequencing of SARS-COV-2 in East Africa to inform epidemic response preparedness	NIHR GHRU TIBA	£50,000	KWTRP, Kenya	100%	RA 1.5
17/63/82	African COVID-19 Preparedness (AFRICO19)	DfID- Wellcome Epidemic Preparedness	£1,663,000	UVRI Uganda, MRC The Gambia, LSHTM & GCVR UK	79%	RAs 1.4+5, 2.6
17/63/121	A descriptive retrospective hospital -based case note review of Atrial Fibrillation management and its Impact on Stroke	Ceylon College of Physicians	£450	Sri Lanka research team	100%	
17/63/130	Research activities of Non-Communicable Disease through DGHS: Building capacity for community mental health care in rural Bangladesh	Ministry of Health and Family Welfare, Gov. of Bangladesh	£67,946	Ark Foundation. Bangladesh	100%	
17/63/130	Building Capacity for Community Mental Health Care in Rural Bangladesh	Ministry of Health and Family Welfare, Gov. of Bangladesh	£43,000	Ark Foundation. Bangladesh	100%	

A total of 24 awards amounting to £5.6m has been raised of which £2.2m is known to have been awarded to LMIC partners. The largest award for £1.7m was for Indian partners from National Institute of Mental Health (NIH USA) and the second £1.66m from DfID/Wellcome for Ugandan partners. A range of in-country funders have also supported awards including Government ministries of health, national professional bodies, charities, NGOs and industry. See section 4.5 for more details.

Annex D. Significant Outputs Highlighted by Award Holders – Internal annex

Where possible, the reason for highlighting a particular output as being significant is taken directly from the report. Table D1 below provide full data for each individual award. See section 3.2 for summary of outputs.

Table D1. Title and link to significant outputs identified by Call 2 Groups

Award	Output title and link
17/63/42	Mycobacterium tuberculosis bloodstream infection prevalence, diagnosis, and mortality risk in seriously ill adults with HIV: a systematic review *Reason for highlighting: "underline(s) the importance of TB in sub-Saharan Africa"*
17/63/42	Population incidence and mortality of sepsis in an urban African setting 2013-2016 *Reason for highlighting: "This effort, which supports recent WHO recommendations on urinary LAM testing, is likely to highlight and change policy on point-of-care TB testing of HIV infected individuals."*
17/63/42	Ebola virus disease *Reason for highlighting: "Through the following key publications, we have also leveraged the ARCS' strengths in providing (list of authors who are also Group members)"*
17/63/42	Evaluating the Impact of Intravenous Fluid Resuscitation on Survival for the Management of Patients with Ebola Virus Disease - *Reason for highlighting: see above*
17/63/47	Four short films made for dissemination amongst police personnel of Mumbai on sensitive handling of cases of violence against women and Children A selection of videos can be found on SNEHA's YouTube Channel
17/63/82	Policy Brief for the Emergency Operations Centre of the Kenya Ministry of Health on preliminary predictions of the spread of COVID-19 in Kenya, impact of interventions and health sector surge capacity
17/63/110	University of Liverpool's NeuroID course
17/63/110	Neurological Infectious Diseases E-learning modules
17/63/130	Bespoke 4S intervention to support smoking cessation in people with severe mental illness
17/63/155	Health and Climate Impacts of Scaling Adoption of Liquefied Petroleum Gas (LPG) for Clean Household Cooking in Cameroon: A Modeling Study *Reason for highlighting: "The paper's importance for the clean cooking agenda is in its quantification of saved lives and reduced morbidity from achieving scaled LPG adoption as a clean fuel, with minimal adverse climate impacts via global warming (LPG being a fossil fuel)."*

Award	Output Type and Title
17/63/20	RECHARGE Core Dataset
17/63/20	Draft manuscripts and manuscripts ready for journal submission; written by LMIC partner junior researchers
17/63/20	Advocacy work (conference presentations, stakeholder meetings, guidelines) *Reasons for highlighting:* • *"Abstracts were presented at the 2019 IPCRG and ERS conferences, generating international interest in RECHARGE, including from a researcher in the Democratic Republic of the Congo, who are part of the costed extension."* • *"We presented at the IPCRG virtual conference regarding the Core Dataset, generating further interest."* • *"In October 2019, we were invited to present at the Congress of the Kyrgyz Thoracic Society. A meeting was held with key stakeholders where we were able to gain support for PR efforts in Central Asia."*
17/63/47	Module for an online course by the Federation of Obstetric and Gynaecological Societies of India, 'Responsibilities of health care providers to address gender-based violence' (SNEHA)
17/63/47	Second annual meeting hosted by Sangath
17/63/66	Questionnaire: Translating the EQ-5D into Krio *Reason for highlighting: "If successful, the Krio translation will have a transformative impact on health research in Sierra Leone."*
17/63/66	Presentation of the EQ-5D at the EuroQuol African Regional Meeting in Cape Town (Feb 2020)
17/63/66	Manuscript: A summary of progress (first 400 patients) consented to the stroke register accepted by the European/World Stroke Organisations (2020) *Reason for highlighting: "Although it is preliminary data, the death rates of 50% by 3 months are very high, with a large number of deaths from pneumonia, probably related to undiagnosed swallowing problems and delays in admission. This has also been communicated with the stroke survivors' group. The study aims to improve the quality of health services in Sierra Leone."*
17/63/82	Sequencing protocol: SARS-CoV-2 WGS protocol (2020) *Reasons for highlighting:* • *"The GeMVi team at KWTRP has successfully established a SARS-CoV-2 WGS protocol (with reagents and protocol provided by the ARTIC Network) and sequenced the first viruses identified in Kenya"* • *"Genome deposits of sequence reads are in process for 30 SARS-CoV-2 viruses on publicly accessible repositories (awaiting Ministry approval)."*
17/63/82	Model: COVID-19 Kenya-specific forecasting model used as a baseline for forecasting the potential impact of next step interventions of the MOH (2020) *Reason for highlighting: "The Warwick modelling team have developed the first Kenya specific forecasting model now being used as a baseline for forecasting the potential impact of next step interventions of the MOH, and to be adapted for other East settings."*
17/63/91	Presentation: Integrating genetic epidemiology into routine surveillance of Plasmodium falciparum in the Greater Mekong Subregion (GMS) (Jun 2019)
17/63/91	Presentation: Multiplexed amplicon sequencing of Plasmodium falciparum for drug resistance genotyping and Barcoding (Nov 2019)
17/63/91	Presentation: MalariaGEN Community Project, GenRe-Mekong Project, TRACII collaboration. Evolution and expansion of multi-drug resistant malaria in Southeast Asia (Nov 2019)
17/63/110	Stakeholder engagement: Interactive session with key policymakers in Malawi discussing key priorities when implementing health policies

Award	Output Type and Title
17/63/130	Webinar series *Reason for highlighting: "These have attracted a total of 326 participants (across IMPACT and a complementary programme ASTRA) with an average of 36 for each webinar. A recent webinar on the psychological impact of COVID-19 attracted over 70 participants. Of particular note was a South-South webinar run by NIMHANS on the 13th March 2020: 'Physical Health in Severe Mental Illness: Refocusing the Gaze'. There were 140 online participants and 45 onsite participants. Participants were from India, Pakistan, Bangladesh, Saudi Arabia, Nepal and UK with a significant variety of organisations joining."*
17/63/130	Several successful grant applications totalling £3,263,500
17/63/145	Capacity-strengthening: Multidisciplinary network and platform for capacity building and training: PI workshops for cocreation of research agenda and strategy; 3 qualitative research training workshops; Five Masters students.
17/63/145	Policy review, stakeholder engagement: Government, academia, healthcare, NGO stakeholder priority setting and research planning network
17/63/145	Country-specific list of interventions to design the CHAT Tool: output of the focus group discussions with communities and stakeholders to inform participatory intervention selection method in each country
17/63/155	Capacity-strengthening: Household air pollution (HAP), health and prevention module (Module 13b) produced for the Kenyan Ministry of Health (MoH) to train the community health workforce (CHW) under Universal Health Coverage (UHC)
17/63/155	Grant application: Leveraged funding to expand research on measuring HAP in Kenya to include emissions modelling in addition to concentrations (kitchen) and exposures (women; children)

Annex E. Performance of partners NETSCC and DHSC Internal Only

1 NETSCC and DHSC approach to programme delivery

NETSCC works closely with DHSC to share information arising as part of NETSCC monitoring of project progress. Monthly Programme Management Meetings (PMM), provide a forum for DHSC and NETSCC to have two-way discussion of activities related to commissioning, monitoring and outputs across the Groups programme portfolio, and any discussion of projects or particular areas of programme activity.

The PMM Terms of Reference cover the following activities:

- Monitor processes and activities related to commissioning, managing contracts for the NIHR Global Health Research Units and Groups calls, assurance of awards and plans for new calls.
- Review, on a monthly basis, progress and emerging issues within contracted Units and Groups via a deep dive of the risks on the GHR project tracker.
- Review and discuss issues arising around projects and risks and any requests made by Units and Groups that require DHSC involvement and approval (in line with the NIHR GHR Escalation Policy), with final decisions confirmed in writing by DHSC. Records of DHSC decisions are kept on MIS, the Project Tracker or another appropriate log.
- Review the financial positions of the Units and Groups and discuss financial issues and financial reporting including forecasting and payments.
- Discuss attendance at GHRU/G Advisory Group Meetings, any planned site visits or in-country visits. Sharing updates and learning from any site or in-country visits.
- Consider the purpose of and arrangements for events relating to GHR Units and Groups (e.g. Funding Committee meetings, funded cohort events, annual project meetings etc.)
- Monitor progress of NETSCC and against actions arising from GHRU/G activities e.g. continuous learning reviews
- Consider updates on impact case studies, blogs, output reports and other communications activities.
- Consider overarching programme Gantt, review progress against agreed activities and resourcing and with DHSC consider any potential impact of emerging priorities on these workplans and deadlines.

Additionally, continuous learning and review is undertaken after initiatives to inform shared learning, actions and to make improvements to the programme and support for the funded cohort. Continuous learning incorporates discussions around opportunities to help manage

DHSC/NETSCC staff workload and identify areas for improving efficiency in how activities are designed, planned and implemented. In the reporting period, this has been achieved through wash-up meetings, following major activities such as Funding Committees, and in the future will expand to become more formal After-Action Reviews, where actions for wider learning are shared with DHSC GHR partnerships and other NIHR centres managing GHR programmes.

2 Portfolio management

Where complex, financial or sensitive challenges or risks to funded projects are identified by NETSCC, these are shared with DHSC for review and approval, in line with the NIHR Global Health Research Escalation policy.

In the reporting period, NETSCC successfully managed an ad hoc external Funding Committee to consider the applications for Costed Extensions and validate recommendations on No Cost Extensions. Applications were submitted and reviewed in the reporting period. Funding decisions were made in the following reporting period and detail will be provided in the next Annual Review.

As described in the main report, on 23 March 2020 DHSC issued guidance to the co-ordinating centres providing advice on management of funded projects affected by the pandemic. As a result, NETSCC advised award holders that funding would continue to support teams, even where staff could not work and where some activities needed to pause and that furlough of NIHR funded staff was not supported. This approach was taken to facilitate staff redeployment to in-country front line COVID-19 emergency responses as needed.

The DHSC guidance included criteria for considering any Change to Programme requests received to either re-structure elements of research programmes to be delivered remotely, or to redirect staff and resources to support COVID-19 research. Changes to Group research programmes which related to the original funded aims but included elements to support COVID-19 emergency responses in-country could be supported provided they met with the required criteria. During the reporting period, whilst a number of teams raised likely delays to their projects through routine monitoring, only one project referenced pandemic-related delays in a formal change request, which was part of a request for a wider set of changes. It is anticipated there will be more requests reported on in the next period.

Requests to undertake research on COVID-19 that did not match originally funded aims were advised that these were not able to be supported and redirected to rapid NIHR focused calls. No examples of this type of request were received by the Call 2 teams in the period. Call 2 Groups were advised that requests for further No Cost Extensions due to pandemic delays would be considered again within the last 12-18 months of their contracts to reduce unnecessary burden and so extension requests on this basis did apply in this reporting period.

3 Financial reporting

Quarterly finance reports are provided to DHSC as part of the standard DHSC Science, Research and Evidence Directorate financial monitoring process. DHSC reports all ODA disbursements and relevant programme and project details to the Independent Aid Transparency Initiative (IATI) registry, as part of the Department's commitment to aid transparency in compliance with the IATI standard. NETSCC undertakes spot checks every quarter on a number of projects to examine transactions and seek documentary evidence of expenditure and ODA compliance of the documented spend. In the period, 5 awards were examined, four reviews have been fully completed and one award is pending further documentary information and one other was found to have a some in-eligible items that were subsequently removed by the contractor.

NETSCC and DHSC have incorporated financial performance and risk rating considerations into the regular monthly PMM meetings. In the next reporting period, NETSCC will be further piloting an award level risk register to support PMM risk review and a format that also directly links to a cross NIHR assurance risk register.

To support attainment of project objectives, extensions to Groups Call 2 awards for time only and costs for additional work have been approved; the impact of COVID-19 is being closely monitored and awards will be offered the opportunity to request further no cost (approximately 6 months) to mitigate justified further delays where needed. As Groups approach their final year of funding, they will continue to be strongly encouraged to ensure that the full budget is used to support delivery of the agreed contracted research.

QSTOX returns (Q4 2019/20) were modified due to the COVID-19 pandemic to include additional data fields to evaluate the impact of COVID-19 on GHR research activities. More detailed breakdowns were later requested (June 2020) to understand the impact of staff redeployed to in-country responses were captured. NETSCC set up a central log of key reported risks, changes to support COVID-19 work, expected delays to Group programmes and the impact on spend across partner countries to inform DHSC.

NETSCC actively track all pandemic-related delays and requests to undertake COVID-19 research across the portfolio. into the next reporting period.

4 Cross-centre working

NETSCC contributes to the broader oversight of the programme through membership of the NIHR Global Health Coordinating Centre Group. Discussions at these meetings between members of DHSC and key leads across the coordinating centres ensure consistency of approach across the NIHR GHR programmes.

Through cross-centre Working Groups, NETSCC and other coordinating centres are engaging on a number of key areas which cut across the coordinating centre activities and

require consistency of approach. Current Working Groups include impact, reporting, communications, CEI, assurance, and Standard Operating Procedures (SOP). All Working Groups are represented by either the Assistant Director or a Senior Research Manager. Good progress has been made in all areas over the period.

In the period NETSCC initiated an assurance visit to South Africa and Rwanda supporting development of an assurance visit template and process and convened a new single application form (SAF) working group to ensure consistency and to streamline the NIHR GHR programme application forms, approach to Call remit specifications, and generate core and finance guidance across GHR programmes. Centres worked with DHSC to agree the content for forms and guidance that was consistent and coherent and reduced burden on applicants.

Other examples of cross-centre work in the reporting period include: NETSC's contribution to development of the Global Health results framework and NIHR Values Framework; and an exploration of ResearchFish functionality with recommendations to DHSC on its viability for collation of annual reporting data and/or longer-term impact data beyond the end of active awards across NIHR GHR programmes managed across NIHR coordinating centres. NETSCC's Centre for Business Intelligence (CBI) provides data expertise and platforms and is responsible for collating data cross centres management information systems and publishing this on NIHR Open Data and the NIHR Funding Awards website. Another joint approach developed in the period in collaboration with DHSC has been the development letters of support for visa applicants wishing to visit the UK. This was identified through NETSCC active monitoring process and cohort meetings, and NETSCC worked with DHSC to develop the process; now adapted and rolled out across all coordinating centres through the SOP working group.

NETSCC continues to support the NIHR Academy in the development of training provision programmes for the trainees, working closely around the needs for trainees and sharing data on trainees, outcomes from annual reviews and promoting new training opportunities within the GHR cohort.

5 Support for networking and learning across the Units and Groups cohort

SLACK channels and the May 2019 cohort meeting are ways NETSCC maintain information exchange and learning across the cohort and have been described elsewhere in this report.

As described in Section 3.8 Table 5, DHSC and NETSCC have also provided advice and support to help establish a number of cross-cohort initiatives led by the research teams themselves such as thematic networks.

NIHR Global Health Research webinars are a further means of equitably and cost effectively engaging with a broad and global audience; two areas covered in response to requests from the funded teams in the period have been finance and project management.

6 NETSCC support for DHSC attendance at meetings and visits

NETSCC supports DHSC visits to LMICs through synthesis of relevant portfolio information. The summaries include project aims, project partners, summary of progress, challenges faced and engagement with partners and stakeholders. In this reporting period, information packs were provided to DHSC for China, Ghana, Uganda, India and South Africa. DHSC in turn provides feedback to NETSCC after the visits have taken place.

Independent/Strategic Advisory Group (or equivalent) meetings which are held by project teams at least once or twice a year are observed wherever possible by a member of the NETSCC team and occasionally by DHSC staff. NETSCC makes arrangements for the participation at this meeting and documents the meeting minutes which are also shared with DHSC and discussed at PMMs.

Data for impact case studies and wider communications and other reporting needs are met in a timely manner by NETSCC when information is requested via agreed business reporting routes.

7 Deliverables – managing workload and communication

In a previous Annual Review process, an issue was raised around NETSCC adherence of agreed timelines for deliverables. This was discussed at a meeting on 3 September 2020 and the outcomes of this discussions were:

- Recognition that some deadlines have been missed (particularly around annual reports) but that there have been various mitigating factors, and the NETSCC team have been working hard and at pace throughout a very busy period.
- Recognising that some DHSC deadlines are immovable as they are driven by factors outside of our control (e.g. requests from Treasury, ICAI, NAO etc) and also reflect that DHSC staff are balancing their time across a much wider portfolio of activities. Where there is flexibility in deadlines, there was agreement that NETSCC would be asked to provide a timeframe for what would be feasible to deliver a particular piece of work – once this has been agreed, this would be considered a fixed deadline and DHSC will plan their work activities around this accordingly.
- PMMs can be used to share current activities and to help identify prioritisation across different competing tasks.
- An overarching Gantt Chart is useful for developing a shared understanding of NETSCC's combined workload and for anticipating any peaks of activity. This is now being shared and kept updated and used as a tool to assist with setting deadlines and assessing workload either within or outside of PMM meetings.
- Both NETSCC/DHSC to avoid using PMMs for immediate decision making – the preference is to either provide advance warning ahead of PMMs of any decisions that

are required (so teams can consult with relevant individuals) or to allow time for teams to take away any issues/estimate resources required outside of the meeting.

- Considering what level of sign-off is most appropriate for the specific deliverable to help manage the team's workload.
- Communication – NETSCC to communicate any anticipated delays in advance of the deadline.
- Communication – both NETSCC / DHSC to consider when IMs/calls may be more efficient than relying upon email.
- DHSC to complete the annual review summary sections after the content of the report has been agreed – this is to enable all DHSC comments to be collated at one point in time, to avoid later changes to the DHSC text, and to avoid multiple rounds of edit if the content of the report changes (and has been referenced in the summary text).

For this Call 2 year 2 annual review specifically, NETSCC have adhered to all agreed timelines and incorporated a vast amount of learning from the process for Call 1 Units and Groups Year 2 annual reviews. This is as a result of more effective and transparent communication between teams.

Annex F. Methods Internal only

The data in this report stem from a number of sources: routine monitoring data available in the MIS system; reports generated by NIHR CBI; routine finance data available through QSTOX and the Annual Report submissions, the latter mainly consisting of qualitative information. The methods of analysis of the Annual Report information are described in more detail below.

Five GHR team members, extracted and analysed the qualitative data from the Groups' Annual Reports and their NIHR Response Letters. To support the analysis, all data was imported into the software program NVIVO[1]. To ensure that all the members were conversant with NVIVO, in-house training on qualitative thematic analysis using the software was undertaken.

A code book was developed to ensure consistency of coding between the five coders. The code book included definitions of themes and sub-themes that were used for the coding of the narrative text. The code book also included clear descriptions for each of the themes and sub-themes.

All coders subsequently coded one annual report and discussed discrepancies in the assignment of their codes before further analysis work was conducted. Coders were then assigned 3-5 annual reports to code individually.

As a quality assurance check, each coder read through one annual report of a different coder and discussed any discrepancies in assignment of their codes. Additionally, coders met weekly to discuss any coding queries which needed resolving.

The decision was made just to include data of past activities, outputs, engagement events, publications and impacts, and to exclude upcoming activities not in the reporting period and aspirational statements of intent. This was due to the uncertainty that the activities would go ahead as planned and on the basis that these future activities would be picked up in other reports.

Limitations

As with every assignment of this nature, there are several limitations to consider. First, the findings are dependent on the level of detailed information provided in the annual reports and Response Letters. This often varied with some award holders giving more information

[1] Qualitative Solutions and Research Pty Ltd (2019). NVIVO. Victoria, Australia.

than others. Often the is considerable duplication of information across sections of the reports which requires significant handling.

Secondly, the merits of transforming qualitative data into quantifiable measures is often debated. Qualitative data allows for a detailed understanding of the why and the how of an issue, but these rich insights can potentially be lost when they are reduced to frequencies. To try and overcome this issue, although frequencies are presented in this report, the narrative is also given, showing the breadth of outputs, engagement activities, and impacts.

Thirdly, it is acknowledged that to improve quality assurance of coding and to reduce subjectivity, double coding would be most favourable. However, due to limited resources and time, a pragmatic approach to quality assurance was applied.

Finally, the main public version of the text for the Annual Reports was focused on, relative to the content in appendices. Appendices were agreed to contain additional detailed financial information or data not appropriate for publication but that could be useful and required by DHSC.

Learning: MEL process

- Annual Report templates should still be more directly aligned with MEL requirements (including the Final Programme Completion Review) and the results framework. The focus for each aspect of the MEL reports (award level, programme level or NETSCC approach) may need to be further clarified, in light of feedback after DHSC review. Another after action review after this third report will be helpful.
- Financial spend, project delivery (against agreed milestones) and project risks were condensed into one overview RAG rating summary. NETSCC are currently piloting a revised more detailed risk register to use in the next report (Call 1 year 3) that can link to a cross NIHR assurance risk register.
- The duplication of data across different fields in the annual reports indicates that further advice to teams may still be required to avoid this duplication of effort and to report an item once and cross refer in other sections. This has happened since the report template used for this round of call 2 year 2 Groups.

Clearance checklist

	Name	Date
Annual Report sections completed by (within delivery partner organisation)	Rozz Bloom Kerry Day Natalija Edwards Rosie Geale Renee Lewin Lisa Marsh Martin Mulenga Hazel Orriss Maria Russell Stephanie Russell Sarah Puddicombe	30/11/2020 V2 21/01/21
Annual report read and annual review sections completed by (DHSC) with input from transparency sub-team	Aaronjay Tidball	V1 09/12/2020 V2 05/02/2021
Annual review shared and signed off by (within delivery partner organisation)	Sarah Puddicombe	V3 04/03/2021
Annual review signed off by (DHSC)	Aaronjay Tidball Alex Ademokun	V3 04/03/2021
SRO sign off for publication	Mike Batley	

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