Department
of Health &
Social Care

GHR Call 1 Groups Annual Review - Year 3

NIHR Global Health Research Portfolio

Published October 2021

Contents

Acronym and Abbreviation Definitions

CEI	Community engagement and involvement
COPD	Chronic obstructive pulmonary disease
COVID-19	Coronavirus disease
DfID	Department for International Development, UK
DHSC	Department of Health and Social Care, UK
ECD	Early childhood development
ED	Emergency department
FAF	Financial assurance fund
FCDO	Foreign, Commonwealth and Development Office
FTE	Full time equivalent
GACD	Global Alliance for Chronic Diseases
GCRF	Global Challenges Research Fund
GFGP	Good Financial Grant Practice
GHR	Global Health Research
GHRG	Global Health Research Group
GP	General practice
HEI	Higher education institution
HIC	High income country
HIV	Human immunodeficiency virus
HRCS	Health Research Classification System
IATI	International Aid Transparency Initiative
ICAI	Independent Commission for Aid Impact
KeNHA	Kenya National Highways Authority
K-SRIC-IPR	Bayero University Kano (BUK), Nigeria and the Institute of Primate Research (IPR), Kenya
KURA	Kenya urban roads authority

LMIC	Low- and middle-income country
LSTM	Liverpool School of Tropical Medicine
MIS	Management information system
MoH	Ministry of Health
MOU	memorandum of understanding
MRC	Medical Research Council
NCE	No-cost extension
NETSCC	NIHR Evaluation, Trials and Studies Coordinating Centre
N-SRIC-BUK	Nigeria Snakebite Research & Intervention Centre, Bayero University Kano, Nigeria
NIHR	National Institute for Health Research, UK
NIRC	Nepal Injury Research Centre, Nepal
NTSA	National Transport and Safety Authority
ODA	Official Development Assistance
QSTOX	Quarterly statement of expenditure
RAG	Red/amber/green rating
SLACK	Searchable Log of All Communication and Knowledge
SOP	Standard operating procedure
SPARC	Short Placement Award for Research Collaboration
SRPNTS	Scientific Research Partnership for Neglected Tropical Snakebite
TV	Television
UK	United Kingdom
UKCDR	UK Collaborative on Development Research
UKRI	UK Research and Innovation
UNICEF	United Nations Children's Fund
US	United States
UWE	University of the West of England
WHO	World Health Organisation

Annual reporting and review process

The Annual Reporting and Annual Review templates are part of a continuous process of monitoring, review and improvement within NIHR's Global Health Research portfolio. These are an opportunity for 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 template have been developed in accordance with cross-funder common reporting practice and will be used to provide accountability for the use of public money, meet Official Development Assistance transparency and compliance requirements. Within these common sections, sub-sections have been included to enable us to monitor progress against planned activities, test our portfolio Theory of Change using evidence collected on outputs and outcomes in accordance with the NIHR GHR portfolio results framework.

The process for completing this template involves the following steps:

1. DHSC works with partners responsible for delivering a funding scheme to ensure that the relevant monitoring information is collected at the award level (as set out in the NIHR Global Health Research results framework). This information will be collected using existing reporting mechanisms wherever possible, before bespoke reporting is considered.

2. Delivery partners collate a synthesis of the award level monitoring information and present aggregated funding scheme level findings (and award level wherever specified) within this template.

3. This report is then shared with DHSC for comment and feedback.

4. DHSC will then use the annual report and additional information gathered through meetings, field visits and any other documentation to complete the annual review template - 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. Please write this summary with a public audience in mind, assuming no prior knowledge of the funding scheme.

5. Annual review signed off and published.

1. DHSC summary and overview

1.1   Brief description of funding scheme

The NIHR Global Health Research Units and Groups call 1 launched in 2016 and was the first large entirely researcher-led funding programme in the Global Health Research portfolio. 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.

 Applications were invited for two schemes:

- NIHR Global Health Research Units: Universities and research institutes with an existing track-record of delivering internationally recognised research who wished to consolidate and expand this work. Funding available: Up to £7m over four years per Unit.

- 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 report specifically focuses on 19 of the 20 Groups from the first call, covering a range of themes and geographical areas, and reports on their progress and performance in year 3 of their contracts (July 2019- September 2020).

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

Of the 19 projects assessed in this cohort, NETSCC assessed 15 of the 19 Groups are largely on track to deliver, with three groups rated amber due to operational risks, and one rated red due to operational, financial and governance risks. In the reporting period, one of the amber rated projects received a no cost extension to support delivery. NETSCC keep financial and overall delivery under close review, particularly in the context of the ongoing pandemic and DHSC will monitor this through updates NETSCC provide ahead of monthly programme management meetings. NETSCC have reviewed and accepted changes to programmes where justified to assist project teams to deliver against their programme of work and respond to changing contextual factors. The Groups cohort is demonstrating strong evidence of engagement with and influence on policy makers. For example, in Kenya a Group has been instrumental in the development of National Guidelines on Maternal Health and has supported the implementation of the 'Respective Maternal Healthcare' policy in Tanzania. In Colombia, evidence from a Group informed a policy to introduce a family

involvement intervention (which includes family members and friends in conversations with the patient and their clinicians) to the Ministry of Health, which will be included as part of routine care for patients with psychosis. The cohort is also demonstrating strong evidence of influence on practice, for example one Group has trained a total of 600 health professionals in Basic Burn Care in regions of Nepal, Ethiopia and Occupied Palestinian Territories. Burns are the second most common injury in rural Nepal, accounting for 5% of disabilities. This valuable work therefore will have significant impact on health outcomes for burns patients in these regions.

Many of the outputs generated during this period have made a significant contribution to global health research with strong potential to address priority areas of need globally. For example, a paper published in the Lancet in May 2020 by the NIHR Global Health Research Group on Evidence to Policy pathway to Immunisation in China (NIHR EPIC) highlights findings on the effects of physical distancing measures on the progression of the COVID-19 epidemic in China; an influential paper that received over 500 citations by August 2020 with implications for management of the pandemic globally.

Across the cohort, there is rich evidence of community engagement and involvement, despite the challenges presented in carrying out face to face activities during varying restrictions across countries. Several Groups reported making use of patient advisory groups and community representation to advise on research strategy, community relations and inclusiveness. Many of these activities included at-risk or vulnerable groups such as engaging rural communities on stillbirth and addressing stigma, and populations at increased risk of road traffic injuries such as children and people living with disabilities. Such groups have been engaged through a variety of methods including community-based education programmes, outreach events and cultural production. An awareness raising campaign during World Alzheimer's' month in Tanzania was attended by 400 people and resulted in a significant increase of patient referrals to their memory clinic.

1.3   Performance of delivery partners

During this reporting period, the onset of the COVID-19 pandemic led to several challenges with regards to managing the existing portfolio and managing risks to delivery. As a result, both DHSC and NETSCC have faced a number of challenges in managing global health research projects during a pandemic and have worked closely to maintain flexibility to continue to support projects and managing high volumes of change to programme requests and variation to contract requests to help mitigate emerging delivery risks. Even in the context of these challenges, the relationship continues to work well. Both NETSCC and DHSC teams continue to collaborate to agree timelines for deliverables which accommodate, as best possible, existing commitments and resources.

A vast amount of learning has been incorporated from the process for Call 1 Units and

Groups Year 2 annual reviews and both NETSCC and DHSC continue to reflect on how the process can be further streamlined. NETSCC continue to closely monitor all projects and are in regular communication with Units.

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

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 annually (in line with original agreed project aims) against which they can be monitored by NETSCC as part of the annual review. This cohort have now agreed the year 3 milestones, which were reported against in this round of reports. NETSCC monitoring approach has contributed to programme level improvements such as informing content for new funding calls, modifying and clarifying NIHR guidance to funded teams, and identifying more efficient and streamlined ways of capturing data. The GHR programme policies and processes have been reviewed and further policies and guidance developed. In the period, significant learning in the delivery of virtual meetings particularly involving global membership has been shared across NIHR to improve ways of working both between DHSC and NETSCC but also with external funding committees and teams.

Additionally, assurance and risk management processes are developing and incorporating lessons from FCDO and UKRI. A due diligence template and an assurance template have been agreed along with associated guidance. 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 these visits is informing considerations for future assurance processes.

The Call 1 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 cost extensions in May 2020. These clauses will be incorporated in any new funding contracts.

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

Recommendation	Owner	Timeline
Explore through the Assurance Working Group how best to conduct virtual assurance visits and share learning	NETSCC	July 2021
Continue to monitor the impact of COVID-19 on this cohort through quarterly QSTOX and regular monitoring and report findings to DHSC; work with DHSC to focus and streamline the data collection to meet key priorities and minimise reporting burden	NETSCC	Ongoing
Work with project teams to support institutional adoption of transparency reporting requirements and incorporate new IATI clauses into new contracts. Work with DHSC to support improved guidance on reporting in line with FCDO	NETSCC	Ongoing through new contract variations, and adoption of new ODA contracts for awards under Call 2 Units and Call 3 Groups from 2021
Share transferable learning from After Action Reviews within a central repository accessible to all delivery partners managing NIHR GHR programmes to inform consistency and quality improvement	All	Ongoing
Work with staff, with award holders and with other delivery partners managing NIHR GHR programmes to improve awareness of the Safeguarding policy and requirements and processes for safeguarding and fraud incident reporting for delivery partners and award holders (contractors).	NETSCC	Ongoing

2. Summary of aims and activities

2.1   Brief outline of each award's/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 first NIHR Global Health Research Units and Groups call launched in 2016. 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.

Applications were invited for:

- **NIHR Global Health Research Units**: Universities and research institutes with an existing track-record of delivering internationally recognised research who wished to consolidate and expand this work. Funding available: Up to £7m over four years per Unit.

- **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.

Thus, the NIHR Global Health Research Groups Call 1 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 focuses on the activities of 19 of the 20 Groups funded over the third year. This was a 12-month reporting period falling between July 2019 and September 2020, based on contract start dates.

The Groups were originally awarded three-year contracts although 19 of the 20 Groups were granted extensions of at least six months. One Group did not receive any contract extension and therefore will complete at the end of year three; this Group submitted an End of Award Report in January 2021 which will feed into a separate Programme Completion Review for the cohort of all awards in this call once these reach the end of contracts.

The individual aims of each of the 19 Groups included in this report are set out in Table 1. A full list of all funded projects can be found on the NIHR Funding Awards page.

Table 1. Aims of each Call 1 Group

Project Title	Project Aims	Countries
NIHR Global Health Research Group on warfarin anticoagulation in patients with cardiovascular disease in Sub-Saharan Africa, University of Liverpool	The Group aims to develop a world-leading and sustainable programme of work into drug safety in LMICs, whilst increasing capability and capacity in the LMICs.	Uganda, South Africa
NIHR Global Health Research Group on Neurotrauma, University of Cambridge	A UK and LMIC partnership that aims to improve the care of patients with traumatic brain injury (TBI).	India Indonesia Malaysia South Africa Colombia Brazil Ethiopia Myanmar Nigeria Pakistan Tanzania Zambia Zimbabwe Philippines

NIHR Global Health Research Group on Psychosis Outcomes: the Warwick--India-Canada {WIC} Network, The University of Warwick	The Group aims to reduce the burden of psychotic disorders in India.	India
NIHR Global Health Research Group on Evidence to Policy pathway to Immunisation in China (NIHR EPIC), London School of Hygiene & Tropical Medicine	The aim of the Group is to conduct applied vaccine research to help decision makers build a vaccination programme that ensure reliable, affordable, equitable and uninterrupted supply of vaccines to the poorest and most at-risk members of the population.	China
NIHR Global Health Research Group on Burn Trauma, Swansea University	The aim of the Group is to improve services and outcomes for burns patients in some of the poorest and most conflict-affected regions of the world.	Ethiopia Nepal Occupied Palestinian Territories Lebanon Sierra Leone
NIHR Global Health Research Group on African Snakebite Research, Liverpool School of Tropical Medicine	The Group aims to establish self-sustaining regional hubs of snakebite expertise to support national and regional authorities design and implement systems to reduce snakebite deaths and disability.	Kenya Nigeria
NIHR Global Health Research Group on Road Safety, University of Southampton	A UK and LMIC partnership that aims to address the rising global health issue of road traffic accidents in LMICs by implementing the Socio Technical systems Approach to Road Safety (STARS) project.	Bangladesh China Kenya Vietnam
NIHR Global Health Research Group on Improving Stroke Care, University of Central Lancashire	The Group aims is to improve stroke care in India, focusing on addressing priorities in stroke care in India via high quality research.	India Malaysia Australia
NIHR Global Health Research Group on Diet and Activity, MRC Epidemiology Unit, University of Cambridge	The Group aims is to prevent noncommunicable diseases (NCDs), including type 2 diabetes, heart disease, and cancers, in low- and middle-income countries (LMICs).	Cameroon Jamaica Kenya South Africa Haiti
NIHR Global Health Research Group on POsT Conflict Trauma; PrOTeCT, Imperial College London	The aim of the Group is to develop and deploy appropriate technology for limb salvage as landmine explosions are the leading cause of traumatic amputation in Sri Lanka today.	Lebanon Sri Lanka Gaza Strip
NIHR Global Health Research Group on Nepal Injury Research, University of the West of England, Bristol	The Group aims to establish the burden of injury in Nepal and to identify opportunities to intervene through understanding and prevention of unintentional injuries in Nepal.	Nepal Bangladesh Netherlands
NIHR Global Health Research Group on Stillbirth Prevention and Management in Sub-Saharan Africa, The University of Manchester	The aim of the Group is to tackle three areas of care in LMIC countries; prevention of stillbirth, better childbirth care and humane and respectful care for bereaved parents.	Kenya Malawi Tanzania Uganda Zambia Zimbabwe
NIHR Global Health Group on Dementia Prevention and Enhanced Care (DePEC), Newcastle University	The aim of the Group is to develop a NIHR Global Health Research Group on Dementia Prevention and Enhanced Care to reduce future numbers developing dementia in LMICs (Malaysia, Tanzania)	India Malaysia Tanzania
NIHR Global Health Research Group on Early Childhood Development for Peacebuilding, Queen's University of Belfast	The Group aims to establish and sustain an international research network that supports the effective use of early childhood development (ECD) programmes to promote sustainable development and prevent conflict in LMICs affected by ethnic divisions and political violence.	Egypt Kyrgyzstan Mali Tajikistan Timor-Leste

		Vietnam
NIHR Global Health Research Group on prevention and management of non-communicable diseases and HIV-infection in Africa, Liverpool School of Tropical Medicine	A UK and LMIC partnership that aims to build a programme of research that informs integrated approaches for the prevention and management of HIV, diabetes, and hypertension.	Tanzania Uganda
NIHR Global Health Research Group on Global Health Econometrics and Economics (GHE2), University of York	The aim of the Group is to produce a robust, locally relevant evidence base of the health and economic impact of population and system level interventions, advance understanding of how to connect the fields of impact evaluation and economic evaluation more closely, and to contribute to strengthening the capability of local decision makers, analysts and researchers in LMICs.	Brazil Indonesia South Africa
NIHR Global Health Research Group on Global COPD in Primary Care, University of Birmingham	The Group aims to foster research in primary care and communities to improve the diagnosis, management and prognosis of Chronic Obstructive Pulmonary Disease (COPD) patients in LMICs.	Brazil China Former Yugoslav Republic of Macedonia Georgia
NIHR Global Health Research Group on developing psycho-social interventions for mental health care, Queen Mary University of London	The Group aims to improve community mental healthcare for people living with severe mental illness by developing psycho-social interventions in low- and middle-income countries.	Argentina Bosnia and Herzegovina Colombia Pakistan Peru Uganda
NIHR Global Health Research Group on Social Policy and Health Inequalities led by the University of Glasgow	A UK and LMIC partnership that aims to identify whether welfare policies introduced to Brazil with the intent to lift people out of poverty have worked in order to implement effective social policies that improve the health for those most in need.	Brazil

Global Health Research themes across the 19 funded NIHR Groups in Call 1

Figure 1 The number of individual Call 1 Groups (total = 19 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
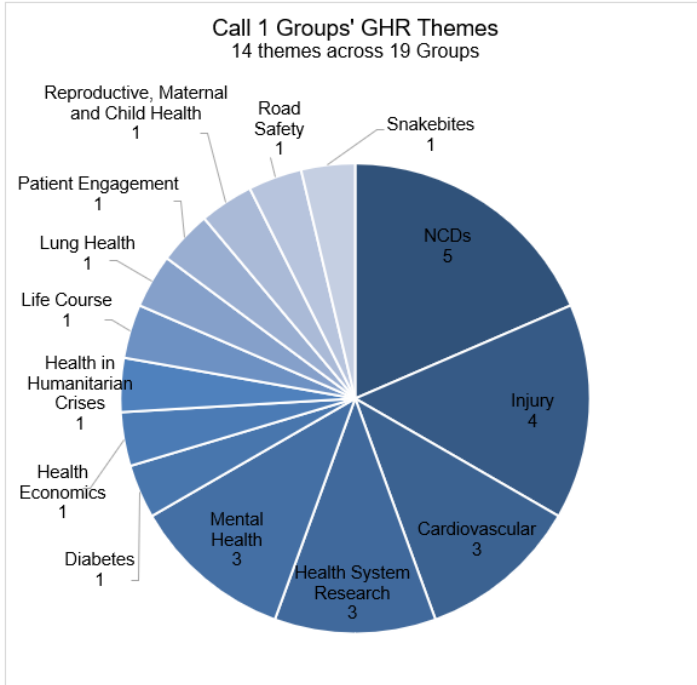

Figure 1 themes were based on the 19 individual Group award HRCS classifications further grouped into 14 broad related themes. The portfolio is diverse, with NCDs and injury being the predominant research themes, followed by a range of topics including cardiovascular, health in humanitarian crises, lung health, and road safety.

Global geographic distribution of distinct Groups awards in LMICs

Figure 2 Heat Map showing LMIC location and number of Call 1 Groups awards
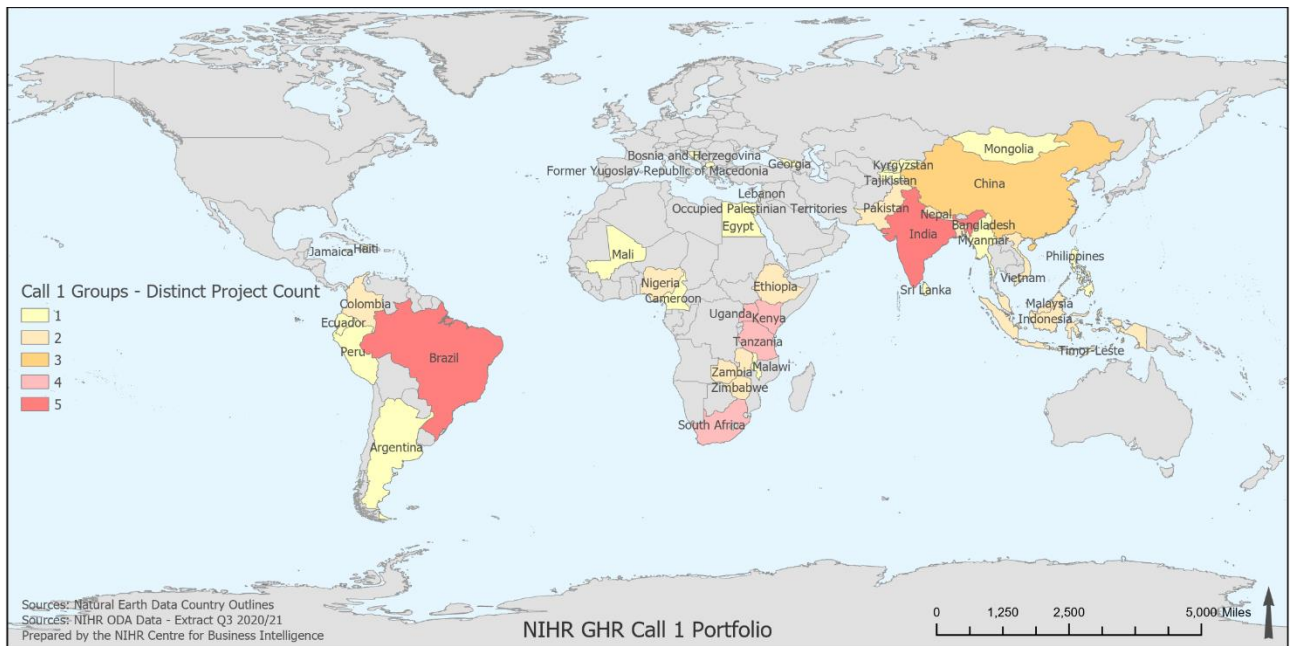
Figure 2 shows the global geographic distribution of the 19 Group awards with a partnership in an LMIC (single LMIC counts per project). Non-LMIC partners (not shown) were eligible, where involvement was clearly justified and brought expertise not available within LMICs and supported ODA eligible research activities. The highest concentration of Group awards in LMICs can be found in Brazil, India, and Bangladesh.

2.2 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 overall progress. This reporting period (July 2019- September 2020) included the onset of the COVID-19 pandemic with research teams reporting the effects on their projects. Fifteen of the 19 groups were rated green; three groups rated amber due to operational risks; and one rated red due to operational, financial and legal/governance risks.

RAG scores were recently determined based on the rating of project progression against milestones and deliverables, communication of issues with NETSCC, and identified risks and their mitigation within the following areas: financial, fiduciary, operational, legal/governance, safeguarding and reputational. Each risk is scored based on likelihood and impact and the combined score used to determine a final rating (red, amber or green). If a fiduciary risk is identified, this is generally weighted as red as it requires urgent attention and further mitigation. Green ratings reflect no unmitigated risks to progress/funded outcomes, amber ratings reflect some risks to progress/funded outcomes requiring mitigation and red ratings reflect significant risks to progress/funded outcomes requiring urgent mitigation. The ratings reflect an overview of project risk ratings within the reporting period undertaken retrospectively.

NETSCC continue to work with these teams to manage risks and support project progress. One of the amber rated Groups received a no-cost extension during the reporting period and risk rating was subsequently revised to green.

2.3 **Community Engagement and Involvement (CEI)**

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

(b) Participation and two-way Communication

(c) Empowerment, Ownership, Adaptability and Localization:

Inclusion

Several groups reported specific details on activities relating to the identification and **inclusion of vulnerable and/or at-risk groups** in their research. One group described how **rural communities** had been engaged around stillbirth to understand cultural practices, educate the public and address stigma. Another example of at risk and vulnerable groups included through CEI are, those at risk for road traffic injuries such as **children, people with disabilities** and those at an increased risk of harm due to discrimination and social inequity.

Participation and two-way Communication

Public engagement involving radio, newspaper, television and social media was widely reported. An example was the production of a film focussing on patients' perspectives of living with chronic diseases. Awareness raising activities, educational talks and **community-based education programmes** engaging various audiences such as schools, area chiefs, local elders and community health workers were achieved through outreach events, barazas (places where meetings with the public are held) and community meetings. An awareness raising campaign during World Alzheimer's month in Tanzania attended by 400 people and including local radio and media, resulted in the regional hospital receiving an initial increase of 136 public and patient referrals to their memory clinic with a continued increase in referrals noticed since the campaign. **Community sensitisation** activities about research projects were achieved through CEI groups and community consultation meetings. Patient involvement in community work, engagement with stakeholders and the training of healthcare professionals helped ensure the **patient voice** was heard by communities and policymakers.

Empowerment, Ownership, Adaptability and Localisation

Several groups reported research **prioritisation activities** including communities to ensure local relevance. Furthermore, CEI activities were involved in the design, data collection and dissemination of research. Some groups describing how **interventions are adapted and localised** through CEI, leading to trust being built between researchers and communities. **Co-designing of research** with communities gave the communities a voice and sense of empowerment. One group reported how they **engaged patients** to see how UK standards for pulmonary rehabilitation could be adapted to suit the local context by taking into account differences in culture and practice. There were reports of CEI aiding patient involvement in research and being used to identify best communication methods to reach at-risk groups and disseminate findings, thus ensuring two-way communication. CEI groups also inputted into patient facing materials and co-produced publications. One Group reported that their LMIC CEI lead and local researcher delivered a presentation to the Zambian Parliament resulting in a raise in the profile of stillbirth as a national issue. **Patient advisory groups** and community representation on projects' trial steering committees helped advise projects on research strategy, community relations and inclusiveness. For example, through CEI, researchers have been better able to understand public perception and understanding of

road injuries. One Group reports that this will improve communication between researchers and communities in future work therefore aiding sustainability of their research.

Groups reported postponement of face-to-face CEI activities due to COVID. CEI activities were under review to explore alternative methods of engagement which included a move to online methods.

3.   Outputs and outcomes

High quality policy/practice relevant research and innovation outputs

3.1   Aggregated number of outputs by output type

NIHR guidance asks that awards report on a broad range of outputs, which can include a range of publication types, and physical research outputs such as guidelines. In this period output reports were required to be submitted 14 days ahead of any intended publication.

Figure 3 displays the cumulative number of output types reported by Call 1 Groups which at a minimum had been accepted for publication, were in pre-publication, or had been published by 04 January 2021. Eighteen 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 presentations (26%, n=179), journal articles (24%, n=161), and media (8%, n=58). Presentations of research work at meetings and health-related conferences are important tools for Groups engaging with a variety of stakeholders including community groups, clinical professionals, academics, and policymakers, to increase awareness of the work being undertaken and emerging findings.
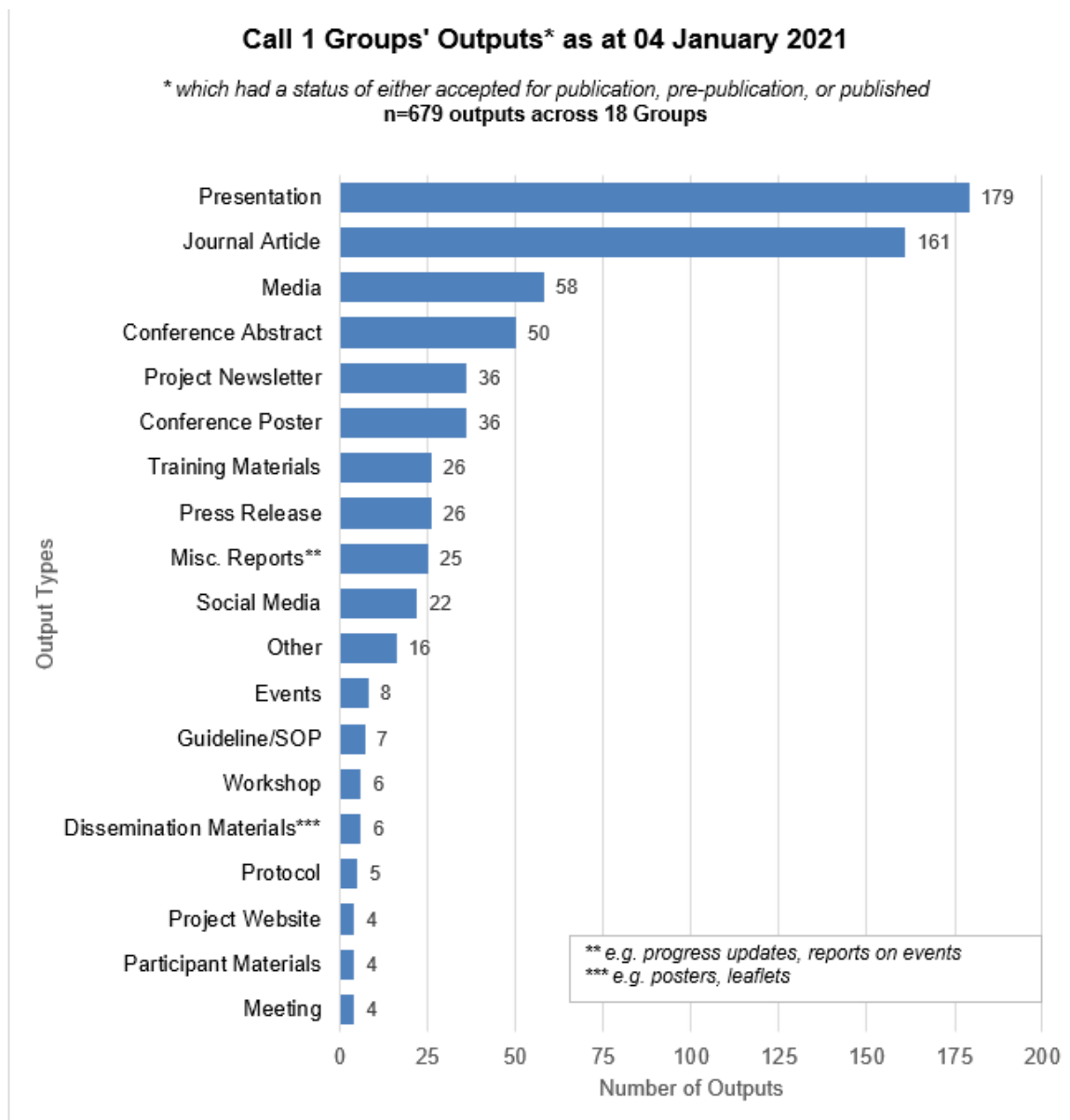
The cumulative total number of outputs reported in year 3 (679) is an increase of 59% compared to the total (427) reported at the end of year 2.

Grouped together under 'Other' in the chart below but included in the overall figure of 679 outputs are the following output types, of which three or fewer of each was reported: feature articles (3), online articles (e.g. opinion pieces, analysis pieces) (3), showcases/conference booths (2), policy briefs (2), and one each of toolkit, systematic review, situation analysis, film, database, book chapter.

Data on output numbers and types are generated through self-reported notifications from research teams through the NETSCC MIS as an ongoing activity over the lifecycle of their awards. Following submission of annual reports between 27 July and 11 September 2020, the report on final numbers and types of outputs was run in January 2021 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.

One Call 1 Group has not reported any outputs yet but has indicated that various publications and dissemination activities are planned for the final months of the project.

Figure 3 Number of outputs by type of output

Call 1 Groups' Outputs* as at 04 January 2021

* which had a status of either accepted for publication, pre-publication, or published
n=679 outputs across 18 Groups

Output Type	Number of Outputs
Presentation	179
Journal Article	161
Media	58
Conference Abstract	50
Project Newsletter	36
Conference Poster	36
Training Materials	26
Press Release	26
Misc. Reports**	25
Social Media	22
Other	16
Events	8
Guideline/SOP	7
Workshop	6
Dissemination Materials***	6
Protocol	5
Project Website	4
Participant Materials	4
Meeting	4

** e.g. progress updates, reports on events
*** e.g. posters, leaflets

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.

Outputs reported as 'significant' by the Call 1 Groups 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 spanned a wide variety of mediums including: journal articles, national and international conference presentations/posters, dissemination materials such as posters/leaflets, and guidelines. Groups reported publications both in high impact factor journals such as The Lancet and the British Medical Journal, and in various

journals focused on specific research/disease areas. Outputs such as a patient information booklet developed by the Georgian Respiratory Association has the potential to improve patient experience, establishment of local baseline incidence (e.g. a community survey on burns) is essential for informing future research needs, and Groups' members have contributed to the development of guidelines (e.g. snakebite management policy and national guidelines for Kenya and Nigeria) which have the potential to improve quality of care.

Examples identified by the teams include:

[The effect of control strategies to reduce social mixing on outcomes of the COVID-19 epidemic in Wuhan, China: a modelling study](#) - The Lancet, 2020

The NIHR Global Health Research Group on Evidence to Policy pathway to Immunisation in China (NIHR EPIC) at the London School of Hygiene & Tropical Medicine published this paper in May 2020 highlighting their findings on the effects of physical distancing measures on the progression of the COVID-19 epidemic in China. This became one of the most influential early COVID-19 papers because it showed how China was able to control COVID-19; the paper had over 500 citations by August 2020.

[Hinge/floating craniotomy as an alternative technique for cerebral decompression: a scoping review](#) – Neurosurgical Review, 2020

The NIHR Global Health Research Group on Neurotrauma at the University of Cambridge conducted a scoping study to determine the need for developing new techniques for cerebral decompression following head injury that would be more applicable to LMIC settings. The study led to the development of a protocol for a new randomised clinical trial of floating/hinge craniotomy to treat head injury. If this trial – for which the team are seeking funding - shows that hinge craniotomy* is comparable to (or even superior to) decompressive craniectomy, there could be huge economic advantages and benefits in terms of optimising healthcare resource usage in LMICs.

Hinge/floating craniotomy is a surgical technique to relieve pressure on the brain following an injury. A section of skull is removed but then immediately put back in a 'hinged' or 'floating' fashion, which means that the patient should not require skull reconstruction at a later date.

Some Groups reported using LMIC local media to publicise their projects and raise awareness of the issues they are working to address. One Group promoted the importance and benefits of pulmonary rehabilitation for COPD patients on Georgian TV on World Lung Day, and another reported their local leads using popular media to reach a wider audience (e.g. in [Tanzania's Citizen Reporter newspaper](#), [Zimbabwe's The Chronicle National Newspaper](#), and a radio interview for Zambia National Broadcasting Corporation). Please

see section 2.3 for an example of a successful awareness campaign which involved local radio and media.

3.3   Lead/senior authorship

Since the start of funding, 180 peer-reviewed publications have been reported by 16 Groups, which is a 157% increase on the number (70) reported at the end of year 2. Figure 4 shows the breakdown of lead authors for externally peer-reviewed publications by gender and nationality as self-reported by Call 1 Groups.

Sixteen of the 19 Groups reported having externally peer-reviewed publications since the start of the award. Across all lead authors, 38% (56) were nationals from LMICs, whilst 62% (91) were from HICs. Female lead authors were outnumbered by male lead authors by approximately 2:1, with only 30% (17) of LMIC lead authors being female and 33% (30) of HIC lead authors being female. However, this is a significant increase in female authorship when compared to Year 2, when only 17% of LMIC lead authors were female.

Groups support LMIC researchers in taking a leading role in drafting papers. One Group noted that the number of publications being led by the LMIC partners is a significant success of the project as lead author LMIC representation has traditionally been very low in international peer-reviewed journals. The Group's Bangladesh team stated that publications in high impact factor journals were only possible because of this collaborative research initiative, and that their capacity to undertake research and write good quality papers had increased as a result of their involvement in the Group.

Figure 4 Cumulative number of externally peer-reviewed publications for lead authors by nationality (LMIC/HIC) and gender for Call 1 Groups since start of funding.
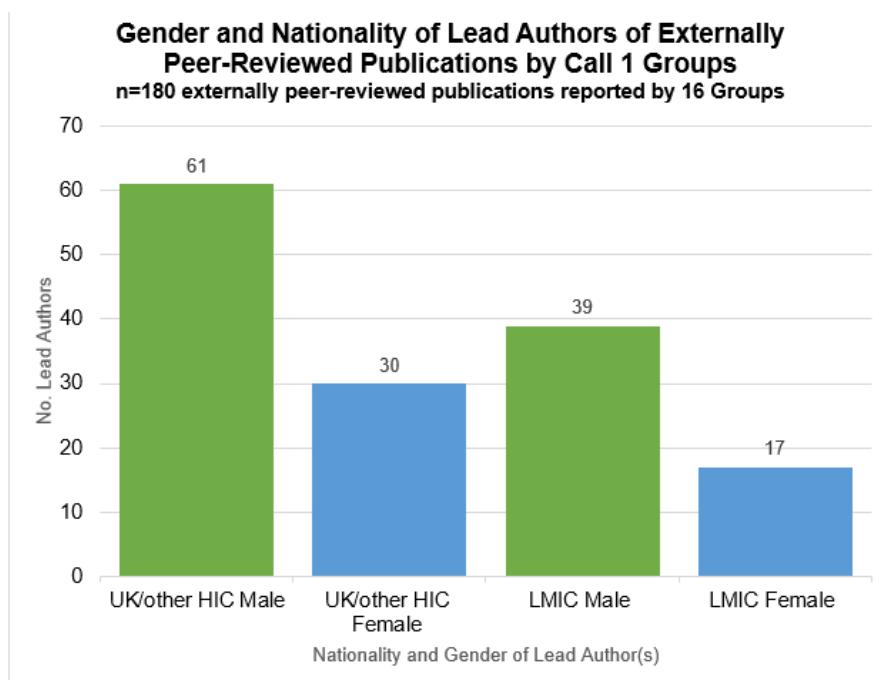
Some Groups counted the same lead author once for two separate publications when reporting their totals, hence the number of lead authors (n=147) is lower than the number of publications (n=180).

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

Outcomes of engagement and influence on policymakers

There are many examples of high-level engagement with policymakers from a number of Groups, but this section highlights interactions likely to result in policy changes and implementation in the near future.

In Nigeria, Kenya and Ghana, a Group met with respective government officials to discuss snakebite issues, including antivenom supply and hospital management. As a result, the Kenyan government has established a Snakebite Task Force. The same Group has been proactively organised an All-Party Parliamentary Group meeting on Malaria and Neglected

Tropical Diseases to discuss research priorities for UK Government funding for tropical snakebite and further helped to inform the Wellcome Trust's seven-year, £80 million strategy for snakebite research.

In Malaysia, a Group gave a demonstration on the utilisation of 5G telemedicine for local and regional patient referrals to the Prime Minister of Malaysia and via national television.

In Kenya, a Group has been involved in the development of National Guidelines on Maternal Health and has also supported the implementation of the 'Respective Maternal Healthcare' policy in Tanzania. The same Group working in the Mwanza region of Tanzania has led the Ministry of Health to conduct medical inquiries in several hospitals across the nation to understand the reason behind the high stillbirth rate. This Group also provided evidence to support international recognition of stillbirth in the WHO and UNICEF strategies.

A Group in Uganda held a stakeholder meeting with representatives from the Uganda Ministry of Health and National Drug Authority to discuss availability of warfarin and the need for a 1mg tablet to aid precision dosing. The Ministry suggested the team draft a policy brief on local issues surrounding anticoagulation care and asked them to indicate the number of people affected. The same Group are also in discussion with pharmaceutical companies supplying warfarin to Uganda on the introduction of a 1mg tablet warfarin dose to enable greater dosing accuracy.

The work of a Group in Nepal has resulted in the local government of the Kathmandu Metropolitan region agreeing to include burn prevention as a key target in their next five-year strategic plan. The Group is currently in discussion with the National Association of Rural Municipalities about a national rollout of their burn prevention programme.

In Colombia, a Group helped to draft a policy brief and budget to introduce a family involvement intervention (which includes family members and friends in conversations with the patient and their clinicians) to the Ministry of Health, which will be included as part of routine care for patients with psychosis.

Another Group is engaged in policy work with WHO seeking the addition of dementia cognitive enhancer drugs to the WHO Essential Medicine list. This is a list of minimum medicine needs for a basic healthcare system, as agreed by an international expert committee, identifying the most efficacious, safe and cost-effective medicines for priority conditions.

Outcomes of engagement with practitioners

There are many examples of Groups who have kept practitioners informed and involved throughout their research programmes, which builds trust and can result in changes to practice being adopted.

In Yangon General Hospital in Myanmar, the Group working on traumatic brain injuries has identified solutions involving the reallocation of neurosurgical staff into the Emergency Department and equipping Emergency Department operating rooms to perform emergency neurosurgical procedures.

At the national level, another Group's work has resulted in the implementation of the first pulmonary rehabilitation service in Georgia and the production of a patient information leaflet on pulmonary rehabilitation, in collaboration with the Georgian Respiratory Association. In North Macedonia, the same Group provided training in support for smoking cessation to 32 GP surgeries as part of a new service being developed. The surgeries were provided with micro-spirometers and carbon monoxide monitors as part of this training. In Brazil, this Group has also leveraged additional funds from the World Bank to set up the first COPD care pathway in primary care.

At Kenyatta National Hospital in Kenya, a Group's advocacy work on behalf of bereaved parents has resulted in four rooms of the maternity unit being allocated to families experiencing a loss, with a counsellor appointed to each family.

The Group working on warfarin anticoagulation in patients with cardiovascular disease in South Africa and Uganda have purchased three portable 'Point of Care' devices for each country, for use in local anticoagulation clinics, which provide quick blood test results at the time of the patient visit. This provides an important opportunity to re-enforce educational measures for adhering to a particular dose.

Another Group has now trained a total of 600 health professionals in Basic Burn Care in regions of Nepal, Ethiopia and the Occupied Palestinian Territories.

In India, a Group's work has resulted in the introduction of a systematic swallowing and hydration management package which has led to changes in practice, staff roles (expanding nurses' scope of practice) and care for stroke patients with swallowing difficulties within three hospitals.

Outcomes of engagement on individual/community behaviour

For some Groups, it is still too early to see the direct outcomes of engagement on individual and community behaviour. However, methods of engagement employed across all Groups include social media campaigns, community volunteer training, community and patient focus groups, working with schools and churches, puppet shows, radio broadcasts, posters and pamphlets, video recordings and plays.

In Nepal, a Group has delivered community burns prevention programmes with the impressive early result that some partner villages have **reported no burns at all** over the last winter, despite extreme weather conditions and a large number of burns reported in the country overall.

In Uganda, a Group has designed and implemented a volunteer support intervention where community members were approached to become volunteers to **reduce social isolation** amongst mental health patients.

In Tanzania, during World Alzheimer's Month in September 2019, a Group delivered a community awareness raising campaign to inform them about dementia, lifestyle and dietary risk factors. As a result of the campaign, **public and patient memory clinic referrals increased** (by 136 older people) at Mount Meru regional hospital.

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 type of higher degrees undertaken by NIHR Academy Trainees from Call 1 Groups is shown in Table 2. Nine of the 19 Groups have NIHR Academy trainees.

The number of NIHR Academy trainees reported has decreased compared to the last reporting year, by 17 individuals from Call 1 Groups' year 2 reports (previously 71 NIHR Academy trainees). As data is a cumulative count, this change is most likely due to improved clarity and understanding of the definition of an NIHR Academy Trainee and prior reporting on other trainees not part of the formal training programme. For example, one Group reduced their reported number of NIHR Academy trainees from 28 to 8 once they had fully understood the criteria which have to be met in order for a trainee to be counted as an NIHR Academy trainee. A significant proportion of trainees (28%, 15) did not state their gender in the most recent data collection exercise.

Some Groups supporting formal trainees intend to use flexible ways to fund formal training awards where the duration extended beyond the term of funding award. For example, the remainder of one student's PhD will be supported by the LMIC partner institution to which he will return after the Group's NIHR funding ends.

Table 2 Type of higher degrees undertaken by NIHR Academy trainees (9 out of 19 Groups reported data)

Training level	Total number who are currently undertaking or have completed during the award period (% total trainees)	% LMIC nationality (% of those undertaking this degree)	% female (HIC and LMIC combined)	% male (HIC and LMIC combined)	% gender not stated (HIC and LMIC combined)
BSc	5 (9%)	5 (100%)	1 (20%)	1 (20%)	3 (60%)
Masters	19 (35%)	16 (84%)	9 (47%)	10 (53%)	0 (0%)
PhD	11 (20%)	10 (91%)	4 (36%)	6 (55%)	1 (9%)
Postdoc	13 (24%)	12 (92%)	1 (8%)	2 (15%)	10 (77%)
Other (e.g. research fellows where training level not indicated)	6 (11%)	5 (83%)	4 (67%)	1 (17%)	1 (17%)
Total number of trainees	**54**	**48 LMIC nationality** (89% of total trainees)	**19 females** (35% of total trainees)	**20 males** (37% of total trainees)	**15 gender not stated** (28% of total trainees)

Table 2 shows that 89% of Groups' NIHR Academy trainees are from LMICs and 35% of the Groups' NIHR Academy trainees are female. This indicates that the Group awards are supporting LMIC capacity strengthening. There is a broad spread of trainees across all the different award types, with the highest total number of trainees studying for a Masters (35% of all trainees), followed by Post-Doctoral (24%), PhD (20%), unspecified (11%), and BSc (9%).

Figure 5 Number (n=48) & reported gender of NIHR Academy Trainees undertaking higher degrees within Call 1 Groups
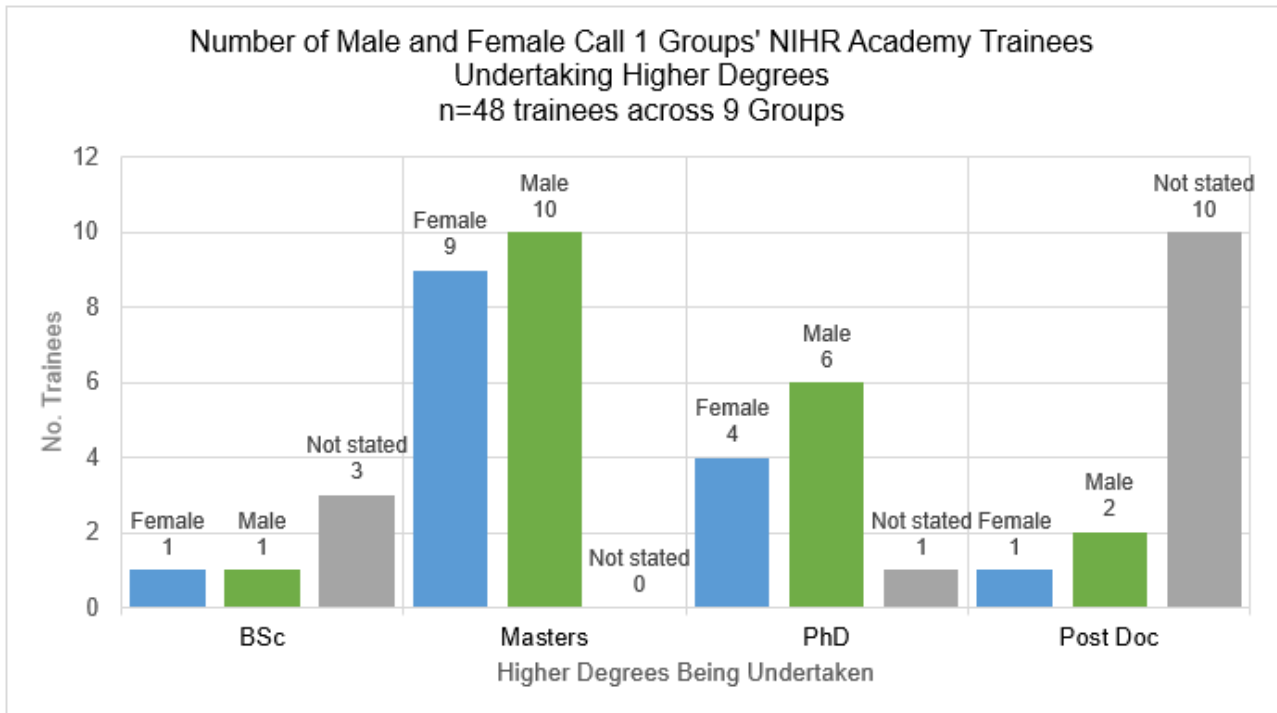

Table 2 and Figure 5 indicate that the gender balance amongst the trainees who reported their gender is quite even, with 35% (19) female and 37% (20) male. As a significant proportion of trainees (28%, 15) did not state their gender, making further conclusions is difficult.

Six NIHR Academy trainees reported by the project teams categorised in Table 2 as 'Other' were not included in the Figure 5; three were undertaking a research fellowship where the training level was unspecified, one was an undergraduate where the degree type was not specified, and two were undertaking shorter periods of formal training.

In terms of the gender of the NIHR Academy trainees undertaking higher degrees (BSc, Master, PhD or Post-Doctoral fellowship), of those who stated their gender, at Master level 47% (9) were female and 53% (10) were male, and more male trainees were undertaking PhDs (55% of PhDs) than female (36% of PhDs). It is not possible to provide an accurate breakdown for post-doctoral fellowships as 10 of the 13 trainees did not state their gender.

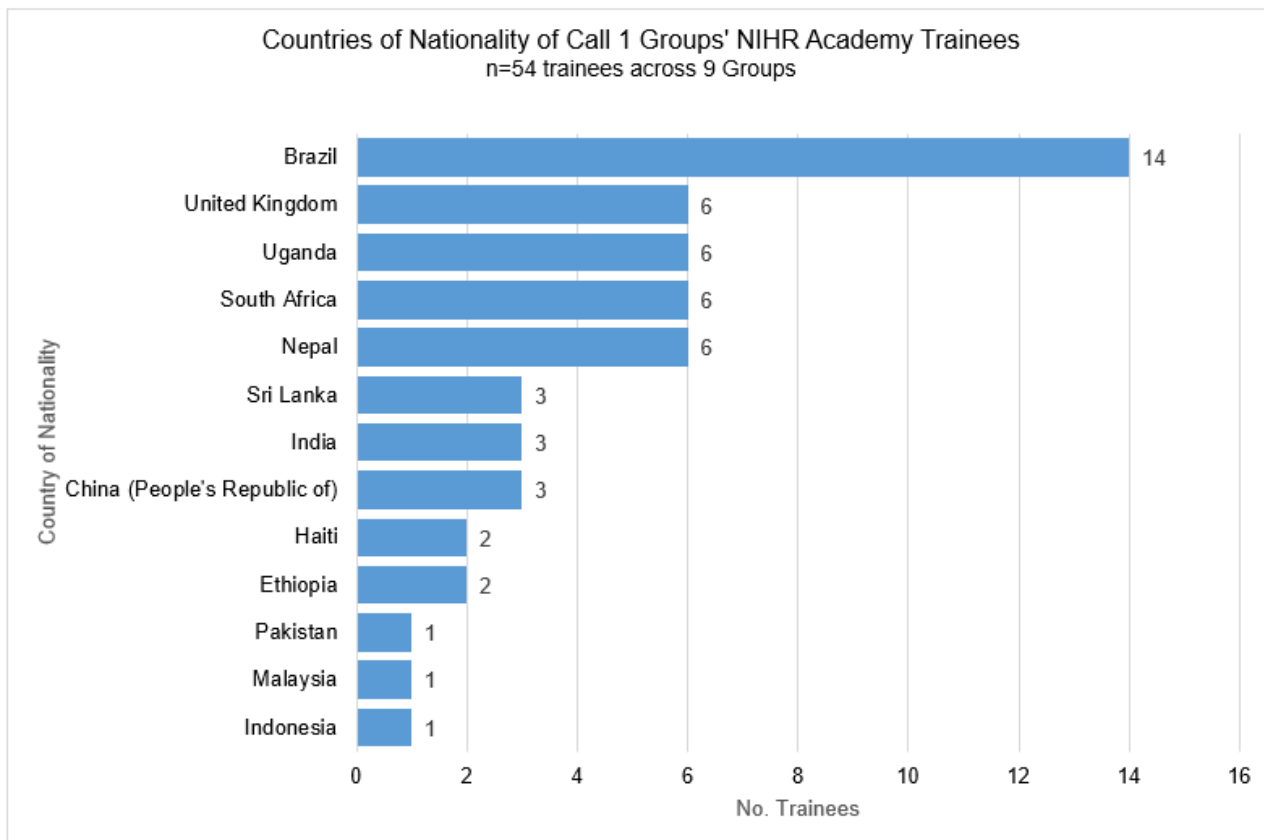*Figure 6 Number (n=54) and nationalities of NIHR Academy Trainees funded within Call 1 Groups*

Figure 6 shows the countries of nationality of NIHR 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 Brazil (26%, 14), Uganda (11%, 6), South Africa (11%, 6) and Nepal (11%, 6). Coverage was reflected across Asia, Africa, and Central/South America. Eleven percent reported UK nationality, but no other high-income country nationalities were reported.

Figure 7 Numbers of NIHR Academy Trainees across the different global regions reported by 9 out of 19 Groups
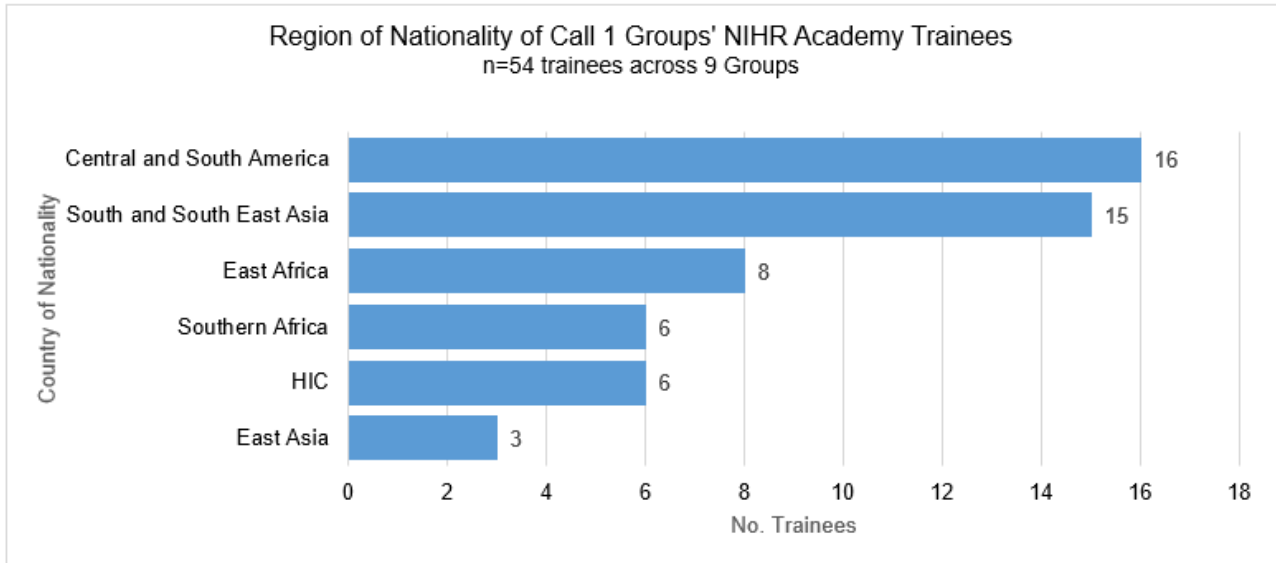

Figure 7 shows countries of nationality reported by the NIHR Academy trainees divided into regions. Central and South America had the highest proportion of trainees (30%, 16), with the next most frequently reported regions being South and South East Asia (28%, 15), then East Africa (15%, 8). UK nationality is under the HIC label.

Figure 8 Number and gender of Call 1 Groups' NIHR Academy Trainees by region of trainee nationality
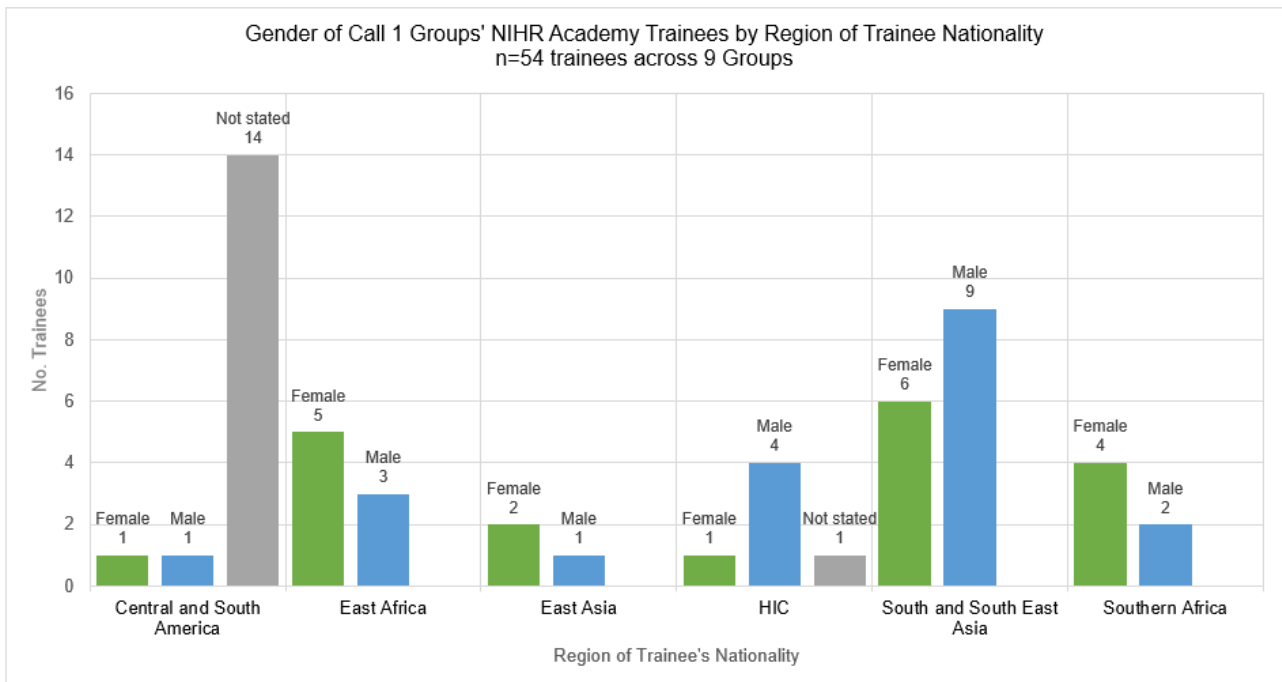
Figure 8 shows the reported genders of the NIHR Academy trainees within each region, grouped by country of nationality, reported across 9 of 19 Groups. The balance of male and female trainees varies by region, with more male trainees in some regions (South and South East Asia & HICs) and more female in others (East and Southern Africa). A significant proportion (26%, 14) of trainees did not state their gender. UK nationality is under the HIC label.

Examples of NIHR Academy trainee activities include:

"The finest achievement of our programme so far has been the establishment of a strong team of Nepali researchers. Three Nepali researchers have successfully completed Masters courses (one with merit (University of Birmingham) and two with distinction (UWE), one being awarded the International Public Health student prize for the highest overall marks amongst the international students on the course. The Nepal Injury Research Centre is already being recognised as a centre of expertise and has been invited to participate in consultation events and activities. There has been extensive two-way knowledge exchange between the UK and Nepal, with the UK team benefiting from contextual expertise from the Nepal research team to enable our research to proceed effectively. We have begun to establish ourselves as the leading organisation in Nepal for the provision of training and education in injury prevention." [NIHR Global Health Research Group on Nepal Injury Research, University of the West of England, Bristol]

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 Funds activities

In June 2018, NIHR launched the Financial Assurance Fund, 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 LMIC partner organisations and provide sustained outcomes beyond the end of NIHR funding. In total four calls were offered between May 2018 and November 2019.

Three Call 1 Groups were awarded new FAF funding during the reporting period through two FAF calls (April 2019 and November 2019 not previously reported). Two Groups were successful in obtaining FAF funds for a second time. Across the total of five Call 1 Groups awards in receipt of FAF funding this was used to deliver activities to support partners to prepare for Good Financial Grants Practice assessment and accreditation. Examples of other funded activities included training on financial management and costing of research proposals, development and production of governance manuals, accounting software purchase and training, and compliance audits.

One Group supported their partners in Kenya (K-SRIC-IPR), using funding from their first FAF award, to obtain a bronze accreditation; this was the first research organisation on the African continent to become GFGP bronze certified. They supported a further HEI partner in Nigeria (N-SRIC-BUK) to be ready to apply for bronze accreditation. The outcome of the final audit will be reported in the next period. The same Group's second FAF award is contributing to efforts to secure a silver accreditation for both these partners.

The other Group with a first FAF award are seeking bronze accreditation by the end of 2020, using their second award to address identified gaps in finance policy development and content. One of the first Groups obtaining funds from the pilot FAF call had leveraged expertise and best practice across the network. They supported a partner in Cameroon to resource and develop financial manual procedures and attend a 4-day workshop hosted by a NIHR GHR Unit in September 2019 and extended to a range of partners.

Other institutional capacity strengthening

As anticipated, COVID-19 has impacted upon the work of Groups, resulting in delays and the need for extensions. The absence of travel has resulted in the adoption of a remote-working culture with online learning and video conferencing utilised to great effect. Groups have responded quickly and in many instances the adoption of a flexible approach has resulted in positive outcomes that have the potential to add lasting value to the future work of LMIC partner organisations.

For one Group, travel restrictions meant that the UK team and Africa coordinators have been forced to take a more 'hands-off' approach in managing the teams. As a result, teams have taken more responsibility for problem-solving and decision-making; an unexpected and positive outcome that will inform their future working practices. Investment in training and infrastructure has continued apace, virtual conferencing and online resources replacing what would have taken place overseas; some examples are highlighted below:

- Three researchers from LMIC partner organisations have been given the opportunity to pursue PhD study at the University of Warwick. This includes collaborative supervision arrangements, whilst enabling the researchers to carry out their primary research activities in their home countries.

- One group has undertaken clinical skills training in diabetes and hypertension across 20 health facilities with plans to extend this to include more sites strengthening institutional capacity on detection and treatment of NCDs.

- A cross-sectional study of live/stillbirth has resulted in the adoption of a routine identification/surveillance system in Tanzania, Zambia and Zimbabwe. These countries are now able to identify available hospital data on clinical outcomes, making it possible to make significant advances in stillbirth prevention.

- Researchers in Myanmar have capitalised on the skills and experience gained through their involvement with GHR-funded projects, galvanising their interest in new research and affording them the confidence to pursue Research Ethics submissions. The team, focussing on Intensive Care in Myanmar, have assisted in a recent application to the World Bank for financial support to aid their emergency response to COVID-19.

NIHR funding has been instrumental in developing the capacity and skills to enable institutions to sustainably continue research. Investment in infrastructure can generate an immediate impact as well as sowing the seeds for future progress:

"Institutional capacity strengthening has primarily been achieved by setting up driving simulators in all LMIC partner institutions. For all universities, this is their first driving simulator research facility within the institution and sometimes within the country. For example, Kenya reported that a University now has an edge […] as the first training institution with a simulator […] the simulator can be used as a training tool for drivers, and for research in collaboration with relevant stakeholders such as NTSA, KeNHA and KURA. Bangladesh had a significant media presence at the opening of their simulator, reflecting the importance of the facility at the institutional level. Vietnam reported that other universities […] plan to send MSc students to undertake research in the driving simulator and other universities have visited with the intention of forming collaborations." [NIHR Global Health Research Group on Road Safety, University of Southampton]

3.7 Aggregated distribution of support staff (collected for the purposes of understanding how wider research support responsibilities are divided between LMIC and HIC institutions)

Table 3 shows that 75% of full time equivalent of support staffing was contributed by staff employed in LMICs. 25% of the total FTE was contributed by support staff employed in HICs. Refer to 3.6 for examples of support staff capacity-strengthening activities.

Table 3 Total number of FTE support staff (research managers, finance, admin, community engagement practitioners, other) in post 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	59.52
Employed in HICs	20.32

*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

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 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.

Equitable collaborative partnerships with regular two-way communication were reported, with some groups describing how the strength of their partnerships has enabled them to successfully continue work through the pandemic. Equitable partnerships have been built and strengthened in a number of ways.

- **Partners participating in or leading research prioritisation activities**: Research prioritised, co-designed or fully designed by partners in consultation with stakeholders to ensure it is relevant to the local context and promotes local ownership.

Continuous engagement with partners and stakeholders through:

- **Meetings**: Groups reported regular project management meetings with partners being mostly virtual with an increase in frequency during the pandemic. Methods of engaging

partners included the use of instant messaging, phone, email, teleconferencing among other online platforms. Annual conferences, workshops and research network meetings were often held face to face in LMICs but had been cancelled and moved online with the onset of the COVID-19 pandemic.

- **Visits:** North-South visits to engage with partners, local stakeholders and policymakers while South-North visits enabled training opportunities. South-South visits aided collaborations and shared learning between partners.

One Group reported how they sought to achieve equity and strengthen their partnerships:

"We aim to maintain equitable partnerships within our GHRG and create a team culture where individual voices are heard and respected. Strategic decisions are shared between the two Co-Directors and discussed at monthly Project Delivery Group meetings. In recognition of the time difference and in respect for our Nepali partners, virtual meetings now take place at 15 or 45 minutes past the hour in the UK, so they occur on the hour or half hour in Nepal. We have agreed that content on our revamped NIRC website should be in both Nepali and in English where feasible, which will support raising the profile of the NIRC in country." [NIHR Global Health Research Group on Nepal Injury Research, University of the West of England, Bristol]

Promotion of local ownership through:

- Local implementation of research and leading of work packages by partners
- Equal involvement in all aspects of the project including monitoring of progress, risk mitigation, report writing, data analysis and dissemination
- Joint decision making
- LMIC lead or co-authors of publications
- Jointly written applications for future funding which has also strengthened partnerships and led to expansion of networks including South-South collaborations

One Group described using an 'autonomy with oversight' model for one of their projects with the intention of aiding sustainability of the work.

Developing and supporting Networks/Collaborations:

NIHR funding has enabled collaborations and the establishment or expansion of topic specific, geographical and LMIC research networks. Developing networks outside of their own groups has helped establish partnerships leading to applications for and/or success in further funding. NETSCC have helped facilitate the establishment of inter-portfolio networks and initiatives between NIHR Units and Groups and other international research collaborations. One group described how they collaborated with another NIHR funded global

health project to deliver a training course. An example is the establishment of a "UK Global Health Research Network on Dementia Care and Prevention" which aims to bring together other UK funded global health projects working on dementia care.

Table 4 below summarises the thematic networks between NIHR funded Units and Groups.

Table 4 Summary of NIHR inter-portfolio networks

Network	Led by	Number of Units/Groups in network	Aims
Surgery	Universities of Birmingham (16/136/79) and Cambridge (16/137/105)	6	Learning from each other's in-country experiences, sharing of surgical resources, and evolving a common strategy for global surgical research for the future
Health economics	University of Birmingham (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 (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.
Respiratory	Universities of Edinburgh (16/136/109) and Liverpool (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

3.9   Delivery partner's summary of any other noteworthy outcomes beyond those captured above

Impact of the coronavirus pandemic

Following the start of the COVID-19 pandemic, an evaluation was carried out in April 2020 and July 2020 using further adaptions to routine quarterly QSTOX reporting (Q4 2019/2020; Q1 2020/21) 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 parts of 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 reported that whilst COVID-19 has impacted research activities, it has also provided 'opportunities to develop and/or deliver several online training modules. Several teams also indicated that staff had been redeployed to support in-country COVID-19 pandemic responses as the example in the box below shows.

A team working in six countries in Africa (South Africa, Ethiopia, Nigeria, Tanzania, Zambia, Zimbabwe) and five in Asia (India, Indonesia, Malaysia, Myanmar, Philippines) on neurotrauma, expanded the project scope to actively contribute to the COVID-19 response by working with collaborators throughout the world to design neurotrauma research relevant to COVID-19. The team is part of an international network of collaborators, including a large number in areas that have already been badly affected by COVID-19 specifically the UK, US, Spain, Italy and China. The team hopes to leverage the experience of such centres in managing neurosurgical and neurological patients during the pandemic to provide support to centres in LMICs who are yet to experience large numbers of cases.

Groups were creative and all continued to progress aspects of their work remotely. No Group had to completely stop their activities; changes to programmes were facilitated to address delay to work packages due to impact of COVID-19.

More information on the project risks related to the COVID-19 pandemic, its impact and the NIHR response is covered in Section 5.

Capacity strengthening

A Group working in Lebanon on post conflict trauma reported that a clear demonstration of impact achieved during the year is that, as a result of the capacity building and successful knowledge transfer, the local partners were able to respond to the medical needs of thousands of casualties of the Beirut ammonium nitrate explosion. The response by the local

team also highlighted the importance of external fixation (a surgical treatment using a stabilising frame to hold the broken bones in proper position) and clinical training.

Engagement with industry

The PI for t one Group provided expertise to five antivenom manufacturers on preclinical and clinical testing in Africa - Premium Serums of India, MicroPharm of Wales, Instituto Clodomiro Picado of Costa Rica, Instituto Nacional de Salud of Colombia and Biological E of India.

Impact on Practice

A Group undertaking research on stillbirth prevention and management in Sub-Saharan Africa has engaged with Ministries of Health and relevant non-governmental organisations in participating nations. For example, findings from their work in Uganda have been disseminated to the Ministry of Health to inform strategies for stillbirth reduction. The work in Mwanza region (Tanzania), has led the Ministry of Health to conduct medical inquiries in several hospitals across the Nation to understand the reason behind the high number of stillbirths. In the same country, the Group has been invited to write proposals for implementing the Respective Maternal Healthcare policy; while in Kenya, they have been involved in the formulation of National Guidelines on Maternal Health. In Zambia, the Ministry of Health is using the new knowledge on stillbirth produced by the Group to replicate research in other parts of the country, as this programme has now drawn equal attention to stillbirth, as compared to maternal and neonatal deaths. As all governments from the focus countries are aiming to reduce stillbirths to less than 12 per 1,000 by 2025, this information is critical to enabling appropriate action to be taken.

4. Value for money

- Delivery partner's summary of evidence from across awards demonstrating activities during the past year to ensure 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 generalisable to maximise the impact of the research for every pound spend across the research-life cycle. Ongoing assessment of value for money 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 ODA budget 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 the reporting period five Global Health Research Groups from Call 1 were subject to expenditure verification reviews; two are complete, and three ongoing. One review identified minor items of expenditure deemed to be ineligible which the contractor was subsequently asked to remove (see section 5.1) for more details.

Groups demonstrated **evidence of achieving value for money** through following established procurement processes, utilising their own infrastructure/resources where possible (e.g. host meetings in-house), organising joint purpose activities to reduce costs (e.g. multipurpose meetings, conferences, and training events), and other cost saving

activities (e.g. price matching, negotiating price reductions, bulk purchasing, booking refundable travel options and the use of matched funding where possible).

4.2   Enhanced efficiency

Enhancing impact

To maximise opportunities to amplify timely stories of impact, all Call 1 Groups are required to upload all outputs generated, within 14 days of publication, onto the MIS. NETSCC track and use data on outputs to demonstrate the emerging impact of ODA funding on intended beneficiaries. The extent of reporting outputs changed in September 2020, to reduce burden and focus on timely reporting of impactful outputs within 72 hours. Annually teams report on their most significant outputs, addressing the evidence needs of people living in LMICs, and examples of these are listed in outputs section 3.3.

Enhancing financial efficiency

Groups demonstrate evidence of enhancing financial efficiency in the period. Examples include using efficient and long-standing procurement processes, following established procurement regulations and organising online events to increase inclusivity and reduce the need for travel (e.g. training and capacity development programmes).

Enhancing sharing of intellectual knowledge

Groups commonly report the efficiency of converting research inputs into outputs, through methods of knowledge exchange, development of partnerships/networks and engagement with stakeholders and communities to aid dissemination. 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 Training Leads.

4.3   Effectiveness

Each Call 1 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.

Drawing on the learning, experience and outcomes of the work of the Units and Groups, in 2020 NETSCC and DHSC published the overarching NIHR GHR programme Theory of Change, and further developed Theory of Changes for Units and for Groups as a framework indicating the inputs, outputs, outcomes and longer-term impact expected and tracked by NIHR to support applicants to planned future Unit and Group calls launched in the reporting period and inform existing award holders reporting on outcomes and impacts.

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 sections 3.4 and 3.9, several examples of early impact have been identified through the 2019-20 annual reports, including high-level engagement with policy makers to ensure study outputs were translating into effective outcomes, such as changes to national policy. As mentioned above, Groups must now inform NETSCC of all impactful outputs generated within 72 hours of publication, these are reviewed in relation to Groups achieving their approved research aims and are also amplified through NIHR channels 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 1 Groups' 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 by providing funding for training of female researchers across a range of formal academic training posts for Groups with highest impact on Masters, then PhDs and Post-Doctoral however trends are still below those of male counter parts beyond Master's levels.

As described in section 3.8, all Groups are actively promoting equitable partnerships. This is demonstrated through continuous engagement with their partners, encouragement of

local ownership, joint decision making 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 1 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 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. Most groups reported the inclusion of at-risk and vulnerable groups in their research with projects mostly designed to specifically improve health outcomes of such populations. As described in the CEI section (2.3), this was often achieved through their CEI activities to ensure the voice of all including marginalised community members or those stigmatised 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 collected is usually disaggregated by gender, socioeconomic status or other characteristics enabling 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   List of any additional research and infrastructure grants secured by LMIC partners during the course of this NIHR funding

Table 5 Grants secured by LMIC partners during course of NIHR funding

Funder	No. applications successfully awarded	Amount awarded (GBP)
UK funders: Cambridge Alborada Trust, UKRI, MRC, NIHR	4	£439,910 (one amount not stated)
LMIC Government/HEI funding	2	£20,800
LMIC NGOs/Professional Societies/Commercial/charities	1 (joint funded with UK)	Not stated
Other international funders: US National Institutes for Health Fogarthy Institute Center and the Office of Behavioural and Social Sciences Research, Canadian International Development Research Centre, WHO, DFID/FCDO Burma		£2,455,849 (one amount not stated)

Nine new funding awards totalling £2,916,559 have been reported as secured **by LMIC partners** since the Call 1 Group awards commenced in 2017. For the two where the percentage of the award allocated to LMIC partners was stated, 100% and 50% of the reported funding was allocated to LMIC institutions. Three other new funding awards were also reported but the amounts were not stated; these included a grant from the Canadian International Development Research Centre, an NIHR GHR SPARC award to support an NIHR Academy trainee, and a project joint funded by the UK and South African MRCs.

A variety of activities have been funded through these additional awards, e.g. an evaluation of labour care guidelines, post-doctoral awards, and study in Brazil assessing the risk of a chronic clinical condition following a previous hospitalisation with a psychiatric disorder. One particularly high value award is the £2.3m from the Canadian International Development Research Centre secured by the University of the West Indies for a study focused on improving household nutrition security and public health in the Caribbean Community (CARICOM).

Some partner organisations have been successful in securing awards from national and/or governmental sources, e.g. the Ministry of Education and Training of Vietnam, whilst others have been awarded funding from international sources, e.g. the World Health Organisation, and US National Institutes for Health Fogarthy Institute Center and the Office of Behavioural and Social Sciences Research.

5.   Risk

5.1   Delivery partner to summarise the five most significant risks (both in terms of potential impact and likelihood) across awards within the last year.

Table 6 shows the five most significant risks, listed in risk registers, across Call 1 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 advised award holders that funding would continue to support teams, even where staff could not work and where some activities needed to pause. This approach was taken to facilitate staff redeployment to in-country front line COVID-19 emergency responses as needed. Changes to research programmes were received where requests to deliver COVID-19 work related to the original funded aims. Any requests to re-purpose funds for new COVID-19 work that did not relate to the existing aims of the Groups were redirected to 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 6 Top five most common, significant risks in terms of impact and likelihood, as reported in the Call 1 Groups Risk Registers

	Risk	**Examples of risk**	**How is the risk being managed/mitigated?**
1	**Contextual** Barriers to timely research progression/ completion, and safeguarding (13 entries from 6 Groups)	• Environmental risk (natural disaster, disease outbreak, epidemics) • Political risks (outbreak of war, political climate, international political tension, economic instability) • Safeguarding risks (personnel safety/travel safety)	Research activities planned around remote working and utilisation of virtual communications; use of local partner knowledge; adherence to government travel advice; completion of risk assessments; ensuring familiarity of emergency procedure protocols; use of personal safety equipment; providing travel insurance for staff.
2	**COVID-19 Pandemic** Impact on research core milestones (15 entries from 12 Groups)	Delays to research progression, deliverables and completion due to the COVID-19 pandemic: • Restricted travel • Researcher safety and exposure • Participant recruitment and attrition • Public health/lockdown measures (impacting on data collection, field research, ethical approvals and access to research facilities) • Unplanned financial costs • Changes to health policies and priorities	Close monitoring of COVID-19 situation; follow official health and safety advice; ensure local guidelines are followed; remote working and use of virtual networks for training; use of alternative research and data collection methods; maintaining regular team communications; requests/applications for no-cost extensions; undertake risk assessments.
3	**Operational** General research challenges (18 entries from 7 Groups)	Delays to research activity due to: • Research management (communication issues, lack of operational flexibility) • Research staff and participant recruitment and attrition • Participant safeguarding (informed consent) • Obtaining approvals and licences • Accessing research materials	Regular team communications; ensure research environment remains conducive; research staff succession planning; implement regular mentoring and supervision; monitor participant recruitment with monthly reviews to management board; implement training programmes; ensure informed consent processes are followed; completion of correct paperwork for in-country delivery.
4	**Financial** General challenges (11 entries from 8 Groups)	• Inadequate financial controls, financial reporting, and misappropriated funds • Exchange rate fluctuation and delay of payment to partners • Limited funds and overspend Activities unable to continue past the end of NIHR award	Ensure strong financial reporting mechanisms are in place; regular financial monitoring; robust record keeping procedures; early notification of finance issues; quality assurance and governance mechanisms in place; due diligence training and mentoring; identify cost savings; seek sources for additional funding.
5	**Organisational** LMIC specific organisational, capacity and capability challenges (12 entries from 7 Groups)	• Governance challenges (ineffective communication, monitoring and evaluation approaches) • Inexperienced LMIC research staff • LMIC research staff capacity compromised (dual roles)	Discuss contracts and procedures with partners; regular whole team and steering group meetings; ensure robust project governance; maintain good communication with research leads; capacity building and training integrated with research; confirm research staff have required qualifications; ensure recruited research staff are aware of posts' tasks; reduce administrative burden on research staff.

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

- their approach to handling accusations of fraud, corruption and bribery (if not covered in previous reports)

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

There were no allegations of fraud or financial impropriety made against any of the NIHR Groups during the reporting period.

Call 1 Group awards are contractually required to undertake due diligence on all downstream partners and establish NIHR vetted collaboration agreements prior to transfer of funds. NIHR encourage the use of GFGP to assist institutional self-assessment and certification against the GFGP standard. One Group identified that all partners were scored as either silver or gold in most categories; resulting in a proportionate approach involving an annual audit report and ad hoc invoice/expenditure checks. One Group achieved bronze accreditation for two partners and is working towards silver accreditation of these partners using further FAF funding; another is in the final stages of assessment for bronze accreditation (see 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. Three Call 1 Groups with LMIC partners in South Africa were assessed during the assurance visit and the learning applied to improve NIHR assurance processes. No concerns were identified (see section 6) for recommendations.

Approximately 5% of quarterly financial reports from awards undergo expenditure verification spot checks of invoices/transactions, and deep dive checks as necessary.

During the reporting period five Groups from Call 1 were subject to expenditure verification reviews. Out of those five, two reviews are complete, and three projects are still being scrutinised. Of the two reviews completed in the period, no issues were discovered during the review for one project, whilst the other had minor items of expenditure that were deemed to be ineligible for funding and the contractor was asked to remove these. The enquiries for the projects that are in review stage are still ongoing and these will be addressed within the report for the next reporting period.

Due to COVID-19 pandemic some Groups have found it difficult to retrieve records in order to provide NIHR with a proof of expenditure. This has caused the reviews to be delayed or go on for a longer period than expected.

The cross NIHR assurance group are made aware of any potential risks to ensure shared learning across the cohort. In general Groups follow NIHR finance and ODA compliance and routinely query eligibility of financial costs where there is any uncertainty.

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 further guidance to award holders is under development in the period. Activities are coordinated through a central NIHR Assurance lead and amendments incorporated into the current DHSC ODA contract to strengthen safeguarding and IATI reporting provisions. Where contractors' due diligence checks on new partners identify any 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.

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. An NIHR GHR concerns/incident reporting SOP provides clarity on the approach to formally report any concerns/allegations/incidents as raised by teams/individuals to NIHR related to fraud/bribery and corruption. NETSCC have both institutional and internal whistle blowing and complaints policies and procedures in place. No concerns or allegations of fraud were identified or reported in the period by teams or individuals. Any concerns/allegations reported to DHSC/NIHR would involve investigation during this period may involve suspension of funding or future planned payments.

NETSCC further supported DHSC in providing evidence of the approach as part of the ICAI review into fraud.

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 actively promoted the publication of UKCDR Guidance on Safeguarding in International Development Research and practical application of guidance in COVID-19 to all award holders in April 2020, and routinely share the DfID/FCDO enhanced due diligence for external partners to support awardees understanding of the expectations on them as

contractors and downstream partners in relation to safeguarding and a need to anticipate, mitigate and address harm.

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. A webinar was held with UKCDR, DHSC and NIHR staff, with parallel event for NIHR award holders in July 2020 to promote the new guidance and to reinforce expectations on safeguarding for individuals and organisations in different roles. NETSCC have institutional and internal whistle blowing and complaints policies in place. A NETSCC safeguarding lead was appointed in the period and training for staff is arranged within next reporting period.

Eighteen Call 1 Groups had explicit safeguarding provisions added to their NIHR contracts as part of the contract variation process to extend their awards in 2019. NIHR requires that this new safeguarding contractual clause be reflected in revised downstream collaboration agreements.

The NIHR annual reporting templates were revised to include specific questions on safeguarding and reporting of incidents.

Three Groups reported that all team members had been required to undertake mandatory safeguarding training, and monitoring and vetting of staff. Seven Groups reported that member organisations either have their own policies in place or have adopted the contractor's policy. Some partners have been subject to external checks; for example, one Group's partner organisation was randomly selected for a spot-check from the UK's Charity Commission to ensure all policies and procedures were in place and up to date (the review was successful with no issues found). Several Groups reported the addition of COVID-19 related safeguarding issues to their risk registers. Three specifically mentioned that no risks had been identified or issues reported.

There were no specific safeguarding concerns raised against any of the NIHR Groups or their collaborating institutes during the reporting period. These would be reported to NIHR and copied to DHSC via incident reporting, and as necessary funding may be suspended whilst serious concerns are investigated.

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.

Teams have demonstrated their awareness of the potential environmental impact of their work, specifically seeking to minimise air travel between partner countries in line with the NIHR Carbon reduction guidelines indicated in guidance to award holders. NETSCC require 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, such solutions include, remote working, use of virtual meetings, online training and alternative approaches to data collection.

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, beyond the significant impacts of the COVID-19 pandemic.

The majority of the reported underspends were related to initial start-up delays as described in the previous Annual Review Reports. As the Groups have moved into their third year of work, reasons cited for delays include issues such as challenges with transfer of funds to LMIC partners, COVID-19 pandemic, delays in ethical approvals for studies, delays in recruiting staff members and unexpected contextual challenges.

During the reporting period 16 teams indicated that they would like to take up a formal opportunity to apply for no-cost extensions of between three and up to 12 months. The no-cost extensions were to account for delays experienced due to challenges faced during the initial start-up phase and as a result of the COVID-19 pandemic. Thirteen NCE requests were approved by the Groups extension funding committee.

Twenty-two Groups' variation to contract requests were approved in the period. This included approval for 14 costed extensions out of twenty requested to undertake new work (some of which included additional time at no extra cost to complete the original programme of work), and eight no-cost time-only extensions. Three of these extensions were specifically related to delays due to the COVID-19 pandemic. During the reporting period further requests for extensions up to the end of costed extensions were requested and supported to address delays related to COVID-19 pandemic; these will be reported in the next period.

In this reporting period, three Groups were successful in obtaining FAF funds, two Groups for the second time. A total of five Groups Awards were awarded FAF funds across the cohort (see section 3.6). These 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. An evaluation of FAF was undertaken in the period to inform integration of financial assurance into future calls.

The average percentage underspend was 3% across all the Call 1 Groups in year 3 - a decrease of 26% from the 29% average underspend reported at the end of year 2 and with eight awards with overspend. One Group demonstrating significant underspends of 51%, due to delays and challenges related to COVID-19, five Groups have overspends over 10%, of which two were substantial and ranged from -31% to -64% again due to impacts related

to COVID-19 or making up for delayed spend in the previous year due to delays with transferring funds to partners.

Based on current spend profiles, taking into account the costed extensions to undertake new work and non-cost extension process to address delays including COVID-19 related delays and change to programmes described below, modelling predicts this will reach an average 7% underspend by end of year 4. Year 4 estimated spend is based on the Year 4 Q2 QSTOX returns. Three awards are predicted to deviate by 10% or more (20%-39% under spend) and two awards are expected to be slightly overspent (-1% to -6%) and how these variances are being addressed will be covered in the next reporting period.

To inform the requirements for a future visits programme, NIHR staff made the Global Health Research programme's first assurance visit in the reporting period which included 3 Call 1 Groups with South African partners. For the GFGP workshop in Rwanda one Call 1 Group with African partners was in attendance. Visit documentation was developed through engagement with UKRI. Documents were shared with institutes for completion in advance of visits. Key learning points from the visit include:

February 2020 visit to Cape Town, South Africa:

- The Assurance Checklist template was not fit-for-purpose for use by downstream partners. This has subsequently influenced the structure of the NIHR template.

- Ideally partners should be given three months to complete the assurance template for NIHR review and prior to the visit.

- Funded partners needed clearer guidance on managing fluctuations in exchange rates. Guidance developed in late 2019 was better promoted to funded teams as a result.

- The language in the NIHR contract is challenging for some LMIC partners to understand and interpret. This will be taken into account in the next revision of the NIHR ODA contract.

- NIHR should consider mandating the use of NIHR logo asset register stickers. This will be reviewed in the next reporting period.

- Some partners reported a lack of awareness of the NIHR's requirements on safeguarding. More information and promotion of materials will be provided when the UKCDR review completes and the NIHR's position published.

- A number of suggestions to improve call guidance notes were made, including highlighting the need to provide finance and administrative support for partner PIs, not just those in the UK. These will be taken into account for future funding calls.

February 2020 visit to Rwanda

- Due diligence checks required before funding is awarded is time consuming and can involve multiple audits and long delays. The absence of a standard NIHR due diligence checks template has also contributed to the delays. A standard due diligence template was made available in the period on the NIHR website.

- A number of teams found NIHR restrictions in moving funds between budget headings was challenging and more flexibility on the part of NIHR was suggested. This will be taken into account in the planned review of the NIHR Escalation Policy.

- The NIHR approach of not releasing funds in advance of need and generally making payment in arrears is a challenge to most LMIC institutions; most teams felt that this should be addressed in future funding calls as LMIC subcontractors and partners often require funding before work begins.

- Reconciling differing donor and government requirements is challenging and leads to project delays. Additionally, funder requirements differ from one call to another and the applicants would prefer more consistency in approach. NIHR are engaging to ensure greater consistency in approaches where possible across ODA funders.

6.2   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 awards to the 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 in perpetuity 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 1 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 as teams were approved for changes to contract such as costed and no-cost extensions. The clause came into effect from Spring 2020 for all awards thereafter 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 continue to work with teams to support

institutional adoption of reporting requirements within the lifetime of the awards and direct award holders to IATI reporting guidance and to respond to queries.

During the reporting period, one Call 1 Group specifically mentioned reporting institutional financial data to the IATI registry using Aidstream.

7. Monitoring, evaluation and learning

7.1   Monitoring

Monitoring activities throughout the review period and how these have informed programming decisions.

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 Unit 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,
- evidence of policies, assurance audits on request
- 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.

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

Awards 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 require 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 awards. The team have prepared a template and guidance for final financial reconciliation and will refine this with feedback from the first awards finishing.

7.2   Evaluation plans and activities that have taken place across awards throughout the review period.

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. In the period an evaluation of the FAF has been undertaken and recommendations for integrating this into future awards made to DHSC. Learning has been shared with the impact working group to inform learning and approach to other evaluations.

To navigate the challenging times ahead brought about by the COVID-19 pandemic, an evaluation exercise was carried out in April and July 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 (*only supported for Groups Awards*)
- 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 awards 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.

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.

- Key lessons

This section summarises portfolio learning from monitoring activities and cohort events over the reporting period:

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.

- for future funding calls, examples of collaboration agreements should be shared at the earliest possible time with clear guidelines on the mandatory clauses.

- the use of bespoke single institution collaboration agreements reduced delays compared to agreeing one all-encompassing agreement across the partners and allowed for research to continue in a timely way.

Data Governance learning points include:

- on recruiting data collection sites, some sites require a Data Sharing Agreements ahead of sharing materials so ensure such agreements are in place at the beginning of the contract to avoid delays.

- use of electronic data capture systems such as REDCap, help in monitoring data providing alerts for abnormal data values in real-time and facilitating timely access to data.

- aligning the data collection and management practices to the Good Clinical Practice guidelines assures that the data and reported results are reliable and accurate, and that the rights, integrity and confidentiality of study subjects are respected and protected.

- developing and sharing a standard operating procedure for general data management and entry ensures consistency practices across all the research collaborators.

Ethics process learning points include:

- giving clear guidance on the importance of <u>only</u> carrying out research activities involving human subjects <u>after ethical approvals</u> have been obtained avoids delays and ensures adherence to required research governance processes.

- 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. For instance, India has complex regional ethical approvals; submission of ethics applications simultaneously to the different regional committees helps reduce delays.

Partner and project management learning points include:

- devolving responsibility for the running of projects to collaborators in LMICs as much as possible helps mitigate against contextual and working challenges such as the current COVID-19 pandemic.

- given the unpredictability of research experience in LMICs, project delays can be minimised by factoring in capacity strengthening at the beginning of the research activities.

- conducting meaningful conversations about roles and detailed protocols supports in an effective hand-over to new staff.

- it is difficult to capture all the outputs and particularly the indirect impact across broad GHR projects; regular reminders to capture outputs and impacts secondary to the primary research activity is helpful.

- partner management, given the diverse nature of the research work packages, and the differing skills and cultures of those involved, can be challenging to different degrees so it is vital to take such differences into account when setting up the research and output targets.

- full involvement of staff at research sites to develop and refine study materials and training content can lead to enhanced engagement, an improved understanding on the implementation process and study documentation.

Language and Communications learning points include:

- engaging research collaborators using social media such as Twitter, Facebook or WeChat can be useful, social media is less successful than other forms of direct personal contact with established connections in each country.

- having PhD students/research staff with specific expertise based in LMIC research sites for longer periods of time during the grant would strengthen communication and support training activities.

- co-producing papers with multiple authors spread across different countries and with varying English language skills can be challenging; projects need to schedule in sufficient time for rewriting multiple drafts and for comment and translation of text for papers and reports.

- maximising the reach of the research findings, can be achieved by publishing the research outputs in the national languages of the beneficiary countries.

CEI and stakeholder engagement learning points include:

- engaging with all stakeholders including, policymakers, academics, clinicians, patients, carers, and community members and leaders throughout the research process can facilitate local impact and uptake.

- engaging with staff at different levels of seniority (from junior analysts to leaders of large teams) can be more productive. The junior staff have the most time to engage deeply and to enrol in formal workshops and degree programmes, but senior staff also need to be signed up and to give input into the design of capacity strengthening.

- maintaining regular communication with research teams and communities through WhatsApp groups, email, country visits, and monthly knowledge exchange meetings and dedicated follow-ups are necessary for continued engagement.

Capacity and capability strengthening:

- capacity strengthening needs to use multiple channels, including workshops, formal education (like enrolment in masters or doctoral level degrees), informal mentoring and joint collaborative projects to be effective.

- forging collaboration with trust, warm working relationships associated with training, can result in improved communication and an increase in research understanding and experience.

- online courses are cost and time efficient and are resilient (e.g. to pandemic lockdowns) and sustainable (lower carbon impact and may enable inclusion of participants from diverse and widely located organisations.

- engaging LMIC partners in formal training activities during a major public health crisis can be challenging and it is therefore important to be highly flexible and open to rapid changes of direction.

- face to face training, facilitated by customised slide-sets and 'hands on training' is the most ideal method, although the use of use of remote videoconference has also proved effective especially during the COVID-19 pandemic.

Financial management learning points include:

- conducting monthly monitoring of all expenditure against the key budget lines in partnership with the finance teams can help with financial management across the quarter and result in timely submission of financial reports.

- the Good Financial and Grant Practice training can enable a consistent approach to the management of grants throughout the grant life cycle.

- including institutional policies for procurement, financial fraud, risk management, anti-bribery, travel and subsistence and grant administration audit report to the risk register would mitigate against inappropriate use of ODA funds.

- UK partners making payments to suppliers, with goods delivered directly to collaborators can be necessary to minimise in-country delays and barriers.

- UK institutions pre-financing LMIC partners - at their own risk can help reduce delays in recruitment and start up.

7.4   Outline key milestones/deliverables for the awards for the coming year

Projects have set their milestones for the next 12-month reporting period in their year 3 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. Where awards have been extended, some awards have been asked for interim reports to span a period between the usual annual report and requirement for submission of a final programme completion report. The programme completion template has been reviewed and approved with DHSC during this reporting period and the framework and process for programme completions are being finalised.

Assurance and risk management processes are continuing to develop and are incorporating learning from FCDO and UKRI. A pre-contracting due diligence template and an assurance visit template and guidance have been agreed. 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 Section 6.1. Annual plans for NIHR assurance visits including shared learning between NIHR and UKRI through a signed MOU are being agreed and supplemented by annual funding reviews of UK institutions.

7.5   Any other comments/feedback/issues to flag to NIHR/DHSC? This could include any suggestions on anything the delivery partner could do to improve its support for award holders, or on anything that DHSC could do to better support the delivery partner.

The key lessons picked up from the Call 1 Groups' annual reports, which NIHR may wish to take into consideration in similar future programmes, are summarised as follows:

- the teams valued the NIHR funding because it has particularly strengthened their knowledge and capacity in terms of community and public engagement.

- during the current COVID-19 pandemic, the NIHR GHR team provided valuable support in reviewing contract variations and securing budget virement approvals.

- local disruptions, such as political unrest, violence or natural disasters remain a real risk in the low resource environments where most funded teams work, and these have been compounded by the COVID-19 situation.

- some teams have been experiencing unusually long delays in transfers of funds both within the UK and overseas due to COVID-19 and these delays are reported on in the quarterly budget reconciliations submitted to the NIHR.

- in some LMICs, it has been extremely difficult to recruit bilingual research candidates with strong quantitative and qualitative skills.

- in most projects, the majority of research staff are employed on temporary contracts for the duration of the project, and this could result into a significant risk to the appropriate reporting and financial closure of the project if people left before the end of the project.

- the partners in some LMICs have found it difficult to accurately forecast their future expenses as they are not used to working on such projections and find it difficult to account for unforeseen obstacles. Given the current COVID-19 situation, this has now become increasingly complicated and difficult to estimate their expenditure for the upcoming quarters and until the end of the project period. There will therefore be certain areas where additional resources will need to be spent to facilitate activities during the

pandemic, for example procuring of equipment, internet and data packages and other software for teams to be able to work remotely.