Department
of Health &
Social Care

NIHR Global Health Research Groups – Call 1

Annual Review – Year 2

NIHR Global Health Research Portfolio

Published December 2020

Contents

Annual reporting and review process

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

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

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

- DHSC works with delivery partners NIHR Evaluation, Trials and Studies Coordinating Centre (NETSCC) responsible for delivering a funding scheme (NIHR GHR Groups) to ensure that the relevant monitoring information is collected annually through reports at the award level (as set out in the NIHR Global Health Research results framework). This information is collected using existing reporting mechanisms wherever possible, before bespoke reporting is considered.

- Delivery partners (NETSCC) collate an NIHR GHR Groups annual report to synthesize the individual award level monitoring information and present an aggregated funding scheme level report (and award level wherever specified) within this template. Any findings or views on performance should be clearly linked to the evidence base.

- This NIHR GHR Groups annual report is then shared with DHSC for comment and feedback.

- DHSC will then use the delivery partner's annual report and additional information gathered through meetings, field visits and any other documentation to complete their own overarching annual review **- relevant sections completed by DHSC are highlighted with green boxes**. This will include an assessment of overall funding scheme performance over the last 12 months, identify lessons learnt, time-bound recommendations for action consistent with key findings and will be used as an evidence base for future funding decisions.

- Annual review signed off and published.

1. DHSC summary and overview

1.1 Brief description of funding scheme

The 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.

20 Global Health Research Groups were successful in Call 1, covering a wide range of themes and geographical areas.

This report specifically focuses on the Groups from the first call and reports on their progress and performance in year 2 of their contracts (April 2018 - March 2019).

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

NETSCC assessed 16/20 Groups to be on track with their overall delivery, and 4/20 to have an amber risk to their overall delivery. NETCC reported concerns regarding 3/20 awards, including political and environmental challenges in addition to procurement difficulties and other delays. However, those experiencing such issues remained largely on track. NETSCC have granted change requests for 8/20 awards to help address any underspend and with mitigation measures in place expect that Groups are on track to reduce underspend to 4% in year 3. NETSCC will keep this level of underspend under close review, and DHSC will monitor this closely through updates NETSCC provide ahead of monthly Programme Management Meetings (PMMs).

Many of the Groups have conducted a wide range of Community Engagement and Involvement (CEI) activities. Groups reported using CEI to coordinate activity and outputs, prioritise and plan activities and develop study protocols and plans.

The most commonly reported output type was presentations, followed by journal articles, conference abstracts and conference outputs. The majority of Groups made mention of communicating their findings to the wider academic community at conferences, delivering presentations or leading workshops in their field of study. In addition, a number of mixed media outputs were reported in the Groups' efforts to communicate their research. This included plain language pamphlets, interviews in news segments in local media or published online, educational resources for new training modules, as well as the use of social media to promote activities locally. A small number of Groups also reported the creation of diagnostic tests and registries, in addition to new technologies or therapeutic tools to be used in interventions (see section 3.1)

NETSCC identified 14/20 Groups with concrete examples of demonstrating engagement with and in influence on practice, which they considered to be the most notable outcome. A significant number of Groups reported varying levels of engagement and influence on policy at the local and national level, including meeting with local government representatives and inviting policymakers to be members or observers of advisory groups. It is also encouraging to see international level engagement with the World Health Organization (see section 3.4)..

More than half of the Groups reported offering training and workshops to increase capacity at organisational level which have helped staff, researchers, students and clinicians gain knowledge and skills in research methods and analysis as well as in screening and diagnostic tools or health interventions. This includes examples of developing training modules modified for use in low resource settings (see section 3.5). At the individual level, the most common higher education opportunity offered across the Groups were PhD positions. Groups also reported offering webinars and seminars in addition to building individuals' capacity on areas such as statistical methods, statistical analysis software, grant writing and systematic review methodology among others.

Overall across the cohort, there are early indications of impact and positive progress towards capacity strengthening and improving the health and wellbeing of people in LMICs (18).

1.3   Performance of delivery partners

Year 2 of the Global Health Research Groups programme coincided with embedding clear coordination and escalation mechanisms between NETSCC and DHSC. Both teams, at NETSCC and DHSC, have increased in capacity over the reporting period, in line with the increase in scale and complexity of the existing Global Health Research portfolio. This has required new members of the team to be onboarded swiftly, roles and responsibilities between NETSCC and DHSC to be clearly defined and agreed, and new processes to be established and embedded. Overall, the relationship is working well, and the NETSCC and DHSC teams collaborate to agree timelines for deliverables which accommodate, as best possible, existing commitments and resources.

NETSCC continue to closely monitor all projects and are in regular communication with Groups. Where any complex, financial or sensitive challenges are experienced, NETSCC

have escalated their recommendations to DHSC for input and approval, in line with the NIHR Global Health Research Escalation Policy.

NETSCC have supported the DHSC team to prepare for in-country assurance visits by producing timely summaries and compiling asset registers of projects active in the areas being visited. The NETSCC team have also continued to provide key information required by DHSC for transparency data reporting purposes.

Continuous learning and review activities are undertaken after initiatives to inform shared learning and actions and to make improvements to the Groups programme and support for the funded cohort.

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

There were a number of core learning points at the Groups level regarding financial management, capacity strengthening, data governance, partner and project management and stakeholder engagement among others. These should be shared with new funding applicants to help them build these considerations into their funding applications and planning timeframes. Across the cohort there is continued demand for detailed updated information on NIHR financial requirements at regular intervals. Opportunities to present on finance data and requirementswith LMIC partners particularly during in-country assurance visits will be built into planning.

Following the introduction of the annual review process, NETSCC identified a need to require award-holders to state and to agree *key* milestones (in line with original agreed project aims) against which they can be monitored with NETSCC annually as part of the annual review. This will be implemented during the contracting stage of future Awards. Another key learning point will be for NETSCC to link financial spend, project delivery against milestones and project risks into one overview RAG (Red/Amber/Green) summary that can be reported at monthly programme management meetings with DHSC.

NETSCC further identified a need to tailor award level reporting templates to directly align with the portfolio results framework and annual review.

Training opportunities and capacity building have become an increasingly important part of the NIHR offer. Many of the Groups have demonstrated a considerable effort to offer formal higher education opportunities and mentorship. However, as a minimum number of posts was not mandated in the call guidance and remit, not all Groups included formal trainees in their project teams given the three-year funding timeframe. For a future Groups funding call, NIHR will be mandating projects offer at least three higher education training posts as a minimum in an endeavour to strengthen the NIHR Global Health Research capacity strengthening offer. In order to support and enable project teams to do this, future awards for Groups will be a minimum of four years in order to allow time to advertise and recruit

higher education posts, and to allow sufficient time specifically for the completion of PhD research.

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

Recommendation	Owner	Timeline
Present Groups' financial spend and project delivery as an overall RAG rating in the monthly project tracker in PMMs with DHSC.	NETSCC	Immediately
To schedule a meeting between NETSCC/DHSC to feedback on pilot of Annual Review reporting template (and consider revisions). Tailor Annual Report templates to directly match Annual Review requirements (including safeguarding).	NETSCC/DHSC	September 2020
Develop and share a workplan with DHSC which maps out all deliverables across the Global Health Research Programmes managed by NETSCC including resources required and timeframes for delivery.	NETSCC	September 2020
Strengthen guidance to award holders on expectations regarding Fraud reporting.	NETSCC/DHSC	A minimum of three months in advance of the next annual report submission
Strengthen guidance to award holders on Value for Money and the 4 Es	NETSCC	A minimum of three months in advance of the next annual report submission

2. Summary of aims and activities

2.1 Overview of award/funding call aims

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

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

The 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 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 aims of NIHR Global Health Groups were:

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 (latterly publication in the NIHR Global Health Journal has been conceived).

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 focusses on the activities of the 20 Groups funded in the second year of their four-year contracts. The individual aims of the 20 Groups are set out in Table 1. A full list of funded awards can be found on the NIHR Funding Awards page.

Table 1: Aims of the Call 1 NIHR Global Health Research Groups

Title	Aims	DAC-list Partner countries	
NIHR Global Health Research Group on warfarin anticoagulation in patients with cardiovascular disease in Sub-Saharan Africa, University of Liverpool	A UK and low- and middle-income country (LMIC) partnership that 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 low- and middle-income country (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
NIHR Global Health Research Group on Psychosis Outcomes: the Warwick--India-Canada {WIC} Network, The University of Warwick	A UK and low- and middle-income country (LMIC) partnership that 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	A UK and low- and middle-income country (LMIC) partnership that aims 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	A UK and low- and middle-income country (LMIC) partnership that aims 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
NIHR Global Health Research Group on African Snakebite Research, Liverpool School of Tropical Medicine	A UK and low- and middle-income country (LMIC) partnership that 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	A UK and low- and middle-income country (LMIC) partnership that aims to address the rising global health	Bangladesh China	Kenya Vietnam

Title	Aims	DAC-list Partner countries	
Safety, University of Southampton	issue of road traffic accidents in LMICs by implementing the Socio Technical systems Approach to Road Safety (STARS) project.		
NIHR Global Health Research Group on Improving Stroke Care, University of Central Lancashire	The project's ambition is to improve stroke care in India. The Global Health Research Group (GHRG) will focus on addressing priorities in stroke care in India via high quality research. They will demonstrate the effectiveness of this approach by conducting an innovative and co-designed study of stroke care initiated in acute hospital settings.	India	
NIHR Global Health Research Group on Diet and Activity, MRC Epidemiology Unit, University of Cambridge	A UK and low- and middle-income country (LMIC) partnership that aims 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
NIHR Global Health Research Group on Global Surgical Technologies, University of Leeds	To identify the barriers to surgical care, characterise and prioritise the unmet surgical needs, develop technological solutions, and implement change and evaluate the effect on healthcare systems.	India	Sierra Leone
NIHR Global Health Research Group on POsT Conflict Trauma; PrOTeCT, Imperial College London	Landmine explosions are the leading cause of traumatic amputation in Sri Lanka today. Ninety percent of Sri Lanka's estimated 160,000 amputees lack proper prosthetic limbs and as such are denied a suitable quality of life following injury. Our aim of developing and clinically deploying appropriate technology for limb salvage will change this. Building on our prior work we will seek to develop a thriving research community between the UK, Sri Lanka, and Lebanon, integrating trauma practice, engineering and clinical research.	Lebanon	Sri Lanka
NIHR Global Health Research Group on Nepal Injury Research, University of the West of England, Bristol	A UK and low- and middle-income country (LMIC) partnership that 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	
NIHR Global Health Research Group on Stillbirth Prevention and Management in Sub-Saharan Africa, The University of Manchester	A UK and low- and middle-income country (LMIC) partnership that aims to tackle three areas of care in LMIC country's; 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	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	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 low- and middle-income country (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 India	Uganda

Title	Aims	DAC-list Partner countries	
NIHR Global Health Research Group on Global Health Econometrics and Economics (GHE2), University of York	1. To produce a robust, locally-relevant evidence base of the health and economic impact of population and system level interventions 2. To advance understanding of how to connect the fields of impact evaluation and economic evaluation more closely 3. To contribute to strengthening the capability of local decision makers, analysts and researchers to interpret/generate evidence on the impact and value for money of population and system level policies	Brazil Indonesia	South Africa
NIHR Global Health Research Group on Global COPD in Primary Care, University of Birmingham	A UK and low- and middle-income country (LMIC) partnership that 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 Georgia	Former Yugoslav Republic of Macedonia
NIHR Global Health Research Group on developing psycho-social interventions for mental health care, Queen Mary University of London	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 low- and middle-income country (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	

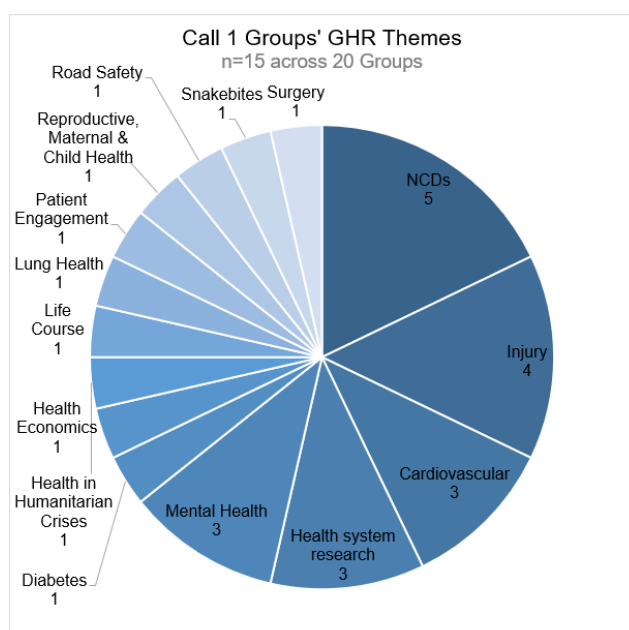## Global Health Research themes across the 20 funded NIHR Groups

Figure 1 shows the number of themes across the 20 Groups. Themes are based on individual Group awards HRCS classifications and then grouped into broad related themes.

Figure 1: Number of GHR themes across the 20 NIHR Global Health Research Groups funded.

Note that each Group's research topic can cover multiple themes.

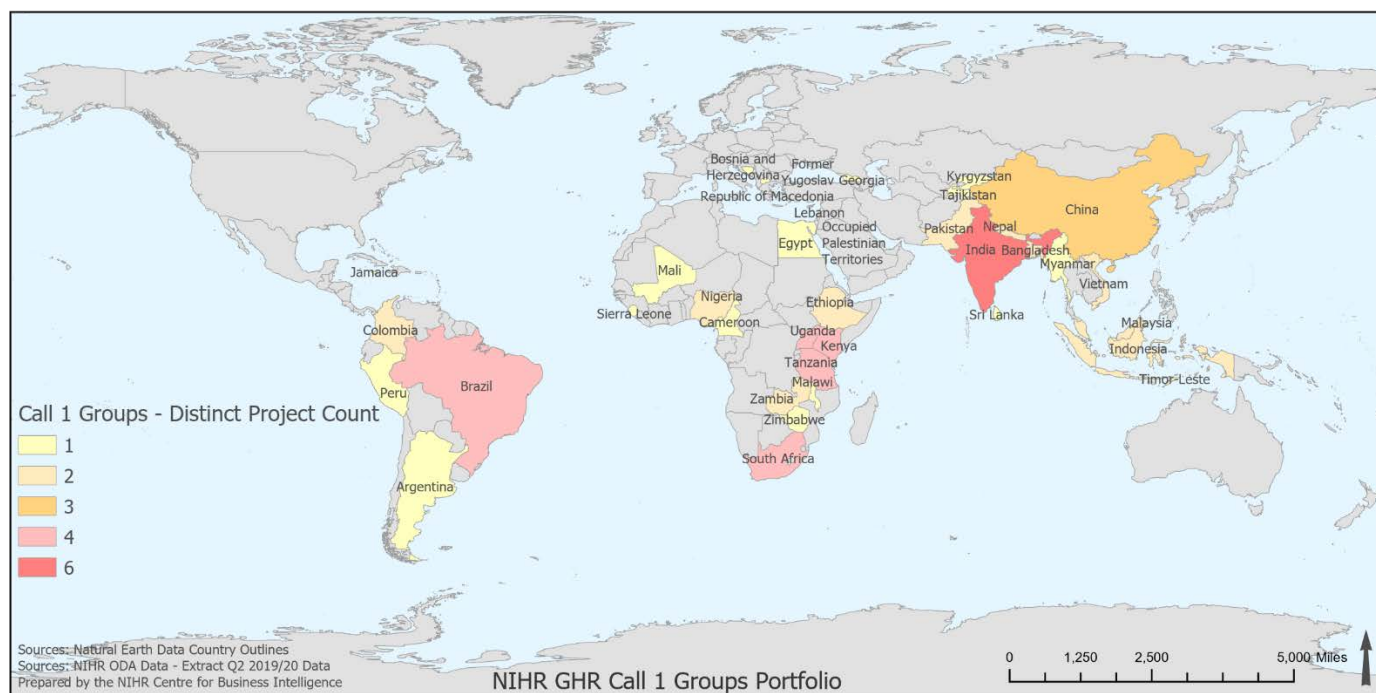**Global geographic distribution of Groups awards in LMICs**

Figure 2: Heat Map showing location and number of LMIC Groups

Figure 2 shows the global geographic distribution of Group awards with a partnership in an LMIC (single LMIC counts per project). Non-LMIC partners are not shown, although they were eligible to apply as co-applicants and collaborators provided ODA eligibility criteria were met overall, there was clear justification for their involvement, and that the resources/expertise could not be found within LMICs. The highest concentration of Groups projects with partnerships based in LMICs are India where six Group projects are partnering. Brazil is well represented with four NIHR-funded Group partnerships, with the same number of partnerships held in a number of East African countries (Tanzania, Uganda and Kenya) as well as South Africa.

2.2   Delivery partner's assessment of progress against milestones/deliverables

NETSCC actively monitor the performance of each Group and on a quarterly basis use a (Red/Amber/Green) RAG rating system to rate each Group's progress in terms of overall delivery and financial performance. In terms of rating for overall delivery, out of the 20 Groups awards funded, four had an amber rating for overall delivery having experienced delays to progress against projected milestones. However, these risks were picked up through NETSCC active monitoring and changes to address these delays for the affected Groups were reviewed by NETSCC and approved in line with the Escalation Policy by DHSC. The remaining 16 Groups were rated Green in terms of overall delivery in the period. Three Groups had experienced major issues or concerns in the reporting period but despite these, the awards remained largely on track. Across all the Groups, six projects were rated amber in terms of financial performance in the period (reporting underspends ranging from

41-66%). The remaining 14 Groups had relatively low levels of underspend (0-33%) in the period. NETSCC approved change requests to help ensure projects could effectively deliver their programme of work. All awards are re-profiled in year to account for underspend at year end and taking account of this were still predicted to achieve less than a 4% (range 3-6%) underspend by the expected end of term of the active contracts.

2.3   Community Engagement and Involvement

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

Seven teams reported details of activities relating to the **identification and inclusion of vulnerable and/or at-risk groups.** The specific vulnerable or at-risk groups identified depends on the nature of the project, but include for instance women with experience of stillbirth, patients with mental illness, burn survivors, patients with visual impairment and other disabilities.

"We have established CEI groups in each partner country, which include women and health providers with previous experience of stillbirth. Their input has helped during data collection and in the interpretation of findings. For instance, in Uganda and Kenya, they have helped rephrase questions of the topic guide to make them culturally appropriate and have suggested how to ask questions to participants in a sensitive way. The NIHR Group is now considering how to develop CEI member's capacities to become consumer groups who can advocate for stillbirth at national level" [NIHR Global Health Research Group on Stillbirth Prevention and Management in Sub-Saharan Africa, The University of Manchester]

b) *Participation and two-way Communication*

The types of engagement activities that communities or patients were involved in covered all aspects of the research process. 10 Groups reported using CEI to coordinate activity and outputs, prioritise and plan research activities, and develop study protocols and plans. One Group reported that community engagement had been crucial to the set-up of and engagement with community pre-schools and that programme co-design has proved essential to building trust with communities.

Four Groups used CEI in supporting data collection and interpreting findings and one Group referred to CEI members being able to co-author relevant papers, whilst three projects mentioned specific outreach events or ways of using websites, newsletters and webinars to engage the public.

c) *Empowerment, Ownership, Adaptability and Localization: How have the projects changed as a result of community engagement and involvement and been adapted to the local context and the needs of vulnerable groups?*

In terms of the impact of CEI activities upon projects, one Group noted that:

"Such engagement has provided insights into how patients can contribute to the shaping and refining of research questions, making research more relevant and supporting dissemination of findings. Ongoing patient engagement activities are incorporated into each project (e.g. involvement in study Trial Steering Committees) and will contribute to enhancement of patient involvement in future research" [NIHR Global Health Research Group on Global COPD in Primary Care, University of Birmingham]

In one Group working in multiple Sub-Saharan African countries, CEI work has been instrumental in shaping future research questions:

"The continued collaboration with the Lugina Africa Midwives Research Network partners has been nationally recognised. In this regard we have been highly commended for the 2018 Times Higher Education awards. The NIHR Global Health Group has built local ownership by involving partners, stakeholders and CEI groups in the data analysis and data interpretation. They have contextualised the research findings and have helped to shape the new study protocols. In Zimbabwe, they unveiled the need to investigate the association between women educational level and reduced foetal movement, which will be explored by the Country Lead in her PhD. [NIHR Global Health Research Group on Stillbirth Prevention and Management in Sub-Saharan Africa, The University of Manchester]

Another team reported that experience in conducting the community surveys had reinforced the importance of co-creating prevention programmes with local stakeholders at the national and community-levels, rather than via international workshops. These examples demonstrate how **research is being adapted and localised**, which in turn is more likely to increase the likelihood of the ownership of research findings.

On a practical level, one Group referenced the importance of providing safe spaces in which participants can be open and frank (also noting the high participation rates among female cooperative groups, making them ideal local partners), which is a good example of adaptation.

Engaging with CEI groups can have positive impacts on practice such as providing a separate hospital room to women who have suffered stillbirths, developing teaching around sensitive issues and experiences, developing a strategy for burn prevention (co-created with local community members), and furthering the sustainability of patient organisations in LMICs:

"The people who attended the Patient, Carer and Public Involvement event also said that they found it very useful and beneficial to meet with other people and carers to share problems, challenges and experiences. They explained that they felt less isolated and felt more positive from hearing about others' challenges, frustrations and how they had overcome them. There are currently only two patient associations within India, which serve a different function to peer support groups. After discussion, the attendees decided that they wished to form a group, which met on a regular basis to share and support each other. The local stroke team is supporting the development of this." [NIHR Global Health Research Group on Improving Stroke Care, University of Central Lancashire].

Feedback from CEI groups has been coupled with an exploration of patient and staff attitudes and experiences through qualitative work to gain improved understanding of topics.

3. Outputs and outcomes

3.1   Research outputs

NIHR guidance asks that Groups report on a broad range of outputs, which can include a range of publication types, and physical research outputs such as guidelines.
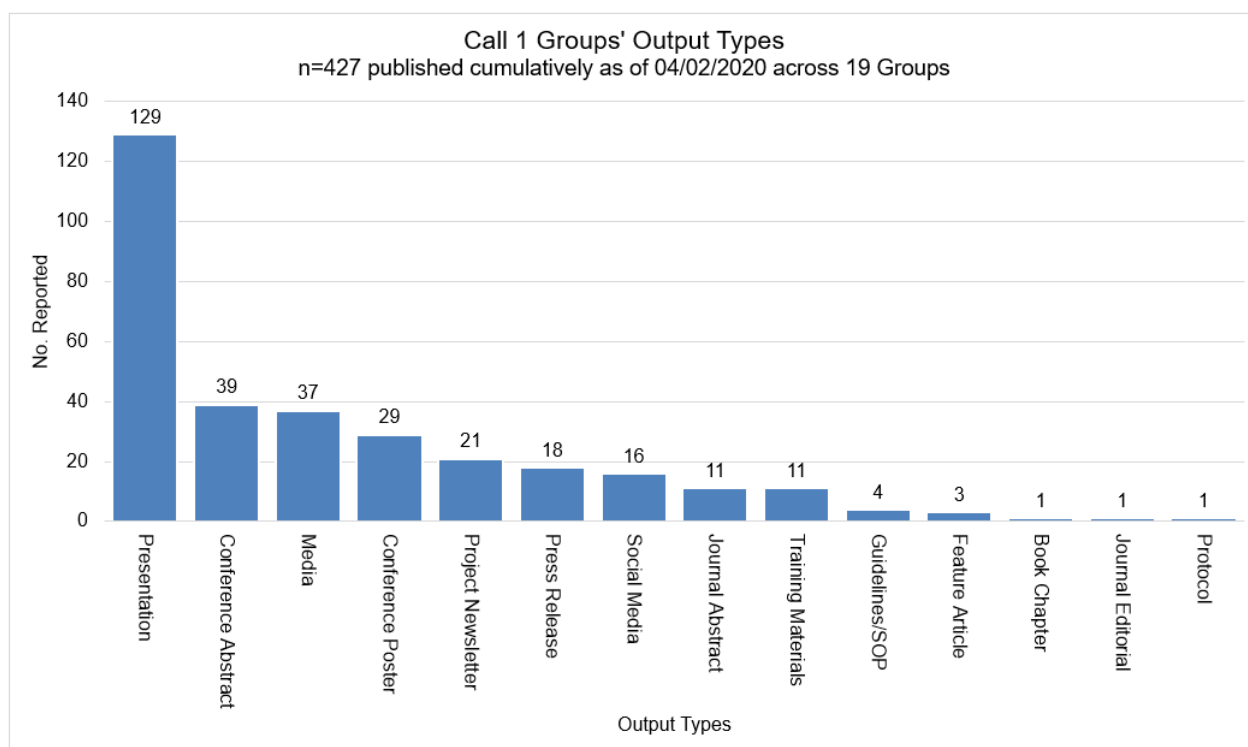

Figure 1: Number of outputs by type of output.

Figure 1 shows the reported number of each type of output for Call 1 Groups. The most commonly reported outputs were presentations, followed by conference outputs (posters and abstracts).

3.2   Publications and presentations

In their qualitative responses, the most mentioned academic outputs were manuscript writing/publishing and presenting at conferences: 17 projects said they had **written and/or published manuscripts** detailing their research findings for academic journals. Most had multiple manuscripts in the pipeline for submission for publication.

18 projects mentioned communicating their research findings to the wider academic community at **conferences**. Nine projects said they used their **own website and/or Twitter** to share their research progress with the public. Some said partner countries run their own Twitter account to be sure the messages targeted the appropriate communities.

Six projects said they used the **arts and media** to share information and generate public interest about their work. They mentioned researchers providing interviews for news

segments, being featured in a documentary, and creating plain language pamphlets for distribution, among other communication methods.

"In partnership with a media organisation in India, The Creative Gypsy, we have made a short educational film on psychosis which is in the final stage of production. The film will be submitted to several international film festivals in the next two years including Cannes, Berlin, and London. The film has already won in the Best Actor Award category at the highly prestigious 10th Dada Saheb Phalkey Film Festival, 2020, India." [NIHR Global Health Research Group on Psychosis Outcomes: the Warwick-India-Canada {WIC} Network, The University of Warwick]
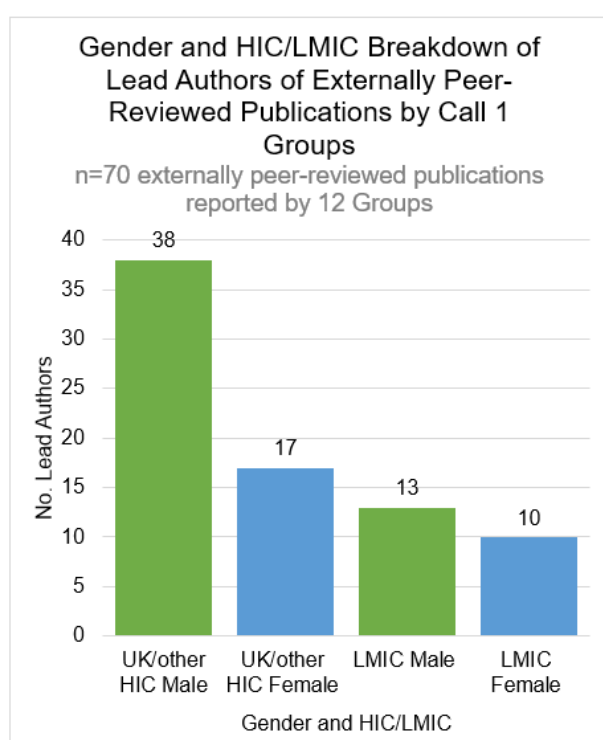
3.3 Lead/senior authorship of outputs

Figure 4 shows the breakdown of externally peer-reviewed publications by location of lead author (LMIC vs UK institution of lead author) and gender. 55 (71%) peer-reviewed publications had lead authors based in High Income Countries (HICs) and 23 (29%) in LMICs i.e. there was a skew in favour of HIC-based lead authors. Women were less likely to be lead authors in both locations (women accounted for 43% of LMIC-based lead authors vs. 31% female in HICs). However, it should be noted that the data is skewed by two projects that have produced a large number of peer-reviewed publications (one had 18, the other 30, which in sum made up 69% of all publications)and three projects did not report any peer-reviewed publications.

Figure 2: Number of peer-reviewed publications by location and gender.
For the publications reported, some had more than one lead author attributed.

3.4 Physical research outputs

A total of 10 projects discussed output innovations[1]. Six projects reported creating a **new technology or therapeutic tool** to be used in interventions. These projects created real life or online tools that can be used to improve health and prevent illness or injury. For example, some projects created mobile apps so clinicians can treat conditions remotely. One project developed smartphone wound imaging technology and another is working on improving existing tools for laparoscopic surgery.

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[1] For example new diagnostic tests, medical devices, registering of patents, new questionnaires, software development, new toolkits, and service innovation, including changes in service delivery models.

> "We have developed a mobile based application […] for patients with established psychosis and their caregivers to ensure continuity of care." [NIHR Global Health Research Group on Psychosis Outcomes: the Warwick-India-Canada {WIC} Network, The University of Warwick]

> "To support our introduction of laparoscopic surgery into North-East India, our engineers are developing a low cost, portable, abdominal lift system that addresses the limitations of the current device, which is made of solid steel, is heavy, cumbersome, and not suited to transportation to remote rural settings." [NIHR Global Health Research Group Global Surgical Technologies, University of Leeds].

Two projects created a **diagnostic test** and a further two created a **registry**. One project reported initiating **surveys** (on task-shifting and -sharing in neurosurgery) and one project reported developing a measurement framework to test hypothesised relationships between early childhood development and social cohesion.

Three projects discussed **creating educational resources** to share their findings with the next generation of researchers, by contributing to existing modules or create new training modules entirely. A further four projects created **training materials**, including the creation of a toolkit. Training materials will help future researchers replicate intervention results or implement interventions.

> "The research Group have developed innovative training using game-based learning with the potential to train midwives in an enjoyable, informal, non-threatening way." [NIHR Global Health Research Group on Stillbirth Prevention and Management in Sub-Saharan Africa, The University of Manchester]

3.4 Outcomes

Outcomes described in the following sections cover influence at two levels - practice and policy.

Influence on practice

14 out of 20 Groups provided examples demonstrating engagement with, and influence on, practice at national and international levels in their Annual Reports. At this point in time, many of these activities can be viewed as steps towards impact.

Three Groups were able to provide evidence of impacting upon practice at the sub-national level, these included **training surgeons** in areas affected by landmines and other blast injuries regarding amputation decision-making criteria and surgical techniques, focusing on **local delivery improvements** by mapping the availability of traumatic brain injury services (and exploring plans for local health service redesign) and supporting rural surgeons.

Building capacity at national level, such as the establishment of National Surveillance Units able to run their own bioinformatics analyses on genomic data, for instance in India and Nigeria, is an example of having a direct influence on practice. Other activities include developing clinical datasets able to screen for patients with First Episode Psychosis, developing an app for dementia screening, introducing drone delivery to address medicines supply issues in Kenya and setting up a traumatic brain injury (TBI) registry in Lusaka, Zambia.

Directly **working with industry** can also impact practice as in the case of one Group, which is working with Roche UK to enable international normalised ratio (INR) test devices (CoaguCheck) to be made available in local clinics for immediate test results on anticoagulation levels. Another example can be seen with a collaboration between the Universities of Leeds and Sierra Leone, together with a local industry partner, which has been established to support the local in-country manufacture of low-cost Ilizarov frames, a type of external fixation used in orthopaedic surgery to lengthen or reshape limb bones, which has the potential to reduce the time patients spend in hospital, improve fracture fixation, and reduce long term disability).

Several Groups are, among other activities, **training health care workers** to improve skills and as a result influencing the quality of healthcare in LMICs. This relates to the training of healthcare workers directly involved in patient care, as opposed to the training of research and research-support staff in research and allied skills that is described in Section 3.3.1.

"In Zambia where the inequality in access to care is directly linked to the numbers of neurosurgeons – previously two, both based in one city – we are helping to build the national training curriculum and offering hands on training courses. These courses have attracted representatives from every district hospital in Zambia including general surgeons. We have already seen an increase in trainees to nine, hopefully leading to a significant improvement in access to neurotrauma care in the future. Similar plans are being delivered in Tanzania. All this in the long run will hopefully lead to improving accessibility to neurotrauma care on a national level." [NIHR Global Health Research Group on Neurotrauma, University of Cambridge]

One award was able to report **positive participant testimonials**, such as a clinician who was participating in testing of a mental health intervention app in Colombia reporting that the app had improved the patient-clinician relationship and allowed them to find out more about their patients.

Monitoring, evaluation and learning activities have been documented with regards to health care practice and the training of health care workers by four Groups with one referring to successful evaluation results at this relatively early stage:

"Evaluation of our Advanced Burn Care Surgery Training in Nepal demonstrated that 96 % of respondents (n=26) had successfully implemented a change of practice in the 6 months following the training. Examples include changes in clinical practice such as early excision and skin grafting, staff working patterns through the introduction of multi-disciplinary meetings, and introduction of morbidity and mortality data review meetings" [NIHR Global Health Research Group on Burn Trauma, Swansea University].

Further, one of the Groups reported that the 'Learning by Doing' training mode adopted by the Group had led to GPs in China reporting they had changed practice in how they trained others.

Wider stakeholder training and engagement is also taking place **beyond the health care sector** such as among police officers or educational staff. This includes training

schoolteachers and counsellors on early identification and referral of mental health disorders among students.

Activities have also taken place to support **patients and caregivers** through the provision of resources e.g.:

"Development and delivery of large scale, electronic Massive Open Online Learning Courses (MOOCs) on dementia care for family and formal carers: A series of dementia specific MOOCs, delivered by the internationally recognised FutureLearn platform, have been developed, which cover the entire dementia journey from diagnosis to death" [NIHR Global Health Group on Dementia Prevention and Enhanced Care (DePEC), Newcastle University].

Three Groups were already in a position to provide evidence demonstrating engagement with, and showing a **positive influence on, individual/community behaviour.** One project was able to demonstrate a rise in snakebite victims seeking appropriate hospital healthcare, another that patients requiring long-term anticoagulation medication were demonstrating better adherence to medication, and a third reporting on improved psychological wellbeing.

"Patient education sessions have been held in Uganda at both Uganda Heart Institute and Kirrudu National Hospital. Information from UK clinics was used alongside local training material to develop brochures distributed to patients in local languages. In addition, talks were held within patient groups to discuss anticoagulation, adherence and drug interactions in a simplified way. Patient feedback was positive, specifically in gaining a better understanding of why they need to take their medication." [NIHR Global Health Research Group on warfarin anticoagulation in patients with cardiovascular disease in Sub-Saharan Africa, University of Liverpool]

"The greatest achievement of the project so far is the amount of positive participant testimonials that we have received since starting the interventions about 6 months ago [...] In Pakistan one patient who is participating in the Family Involvement intervention reported that they had been feeling sad and stressed before the session, but following it they were feeling a lot more relaxed. Furthermore, patients and family members have both found it beneficial to have a safe space where they are able to talk freely about issues" [NIHR Global Health Research Group on developing psycho-social interventions for mental health care, Queen Mary University of London].

Influence on policy

18 Groups reported conducting activities that were designed to engage with and influence policy.

Sub-national and national level

Seven projects reported activities relating to engagement and influence on policy at the sub-national level. Four specific examples of engagement with **local government representatives** and stakeholders at the sub-national level could be identified, including the following example:

"At a local level we have engaged with the Makwanpur district municipality mayors for each of our studies [in Nepal]. Mayors have given us permission to conduct our studies within their jurisdiction and we will prepare policy briefings for Mayors to inform them of our project outputs and to enable them to make strategic decisions at a local government level." [NIHR Global Health Research Group on Nepal Injury Research, University of the West of England, Bristol]

Establishing contact with **local medical officers** was reported by two Groups and one reported how for cross-sectoral policies, engagement with local policymakers **outside of the health sector** was helpful in influencing policy development.

Most engagement with and influence on policy is directed at the national level, as reported by 14 Groups, although there is significant overlap between these levels. Engagement with and influence on policy at national level can take place in many forms. The focus at this stage of the awards is generally on securing the buy-in of key government stakeholders, which is key to achieving longer term impact on policy and practice.

Sometimes in-country meetings that involve policymakers are initiated in the **set-up phase** of the project to publicise the research programme. Four awards referred to **workshops, courses or study visits** they had organised for stakeholders (including policy makers). Six awards have invited policymakers to be **members or observers of advisory groups**, thus putting policy engagement at the heart of the research programmes.

Five award-holders have been active in engaging with **parliamentary authorities** in an attempt to raise awareness and influence policy, either in the UK or in LMICs. Other ways of influencing policy can be through engagement with **key scientific organisations, NGOs or industrial players**.

Five award-holders reported sharing research data and methods with national organisations, often through being invited as members of a committee. For instance, one Group shared relevant research findings with the National Transport and Safety Authority in Kenya.

Eight Groups were able to report policy briefs or evidence of direct policy influence, for example:

"In Kenya, our work on bereavement care is informing national clinical guidance and one of our research assistants is an invited member of the committee." [NIHR Global Health Research Group on Stillbirth Prevention and Management in Sub-Saharan Africa, The University of Manchester]

"We have completed phase one of this additional piece of work, setting out national child development standards for the Egyptian Government….all six partner countries (Egypt, Kyrgyzstan, Mali, Tajikistan, Timor-Leste and Vietnam), and their respective ministries of Education, Health and Social Solidarity, have expressed clear commitments to use our research findings to inform emerging policy in-country." [NIHR Global Health Research Group on Early Childhood Development for Peacebuilding, Queen's University of Belfast]

International level

At the international level, engagement with the **World Health Organization** was a focus for the research teams of eight Groups:

"Members of this Global Health Group were key writers of WHO's strategy to halve the death and disability of snakebite by 2030." [NIHR Global Health Research Group on African Snakebite Research, Liverpool School of Tropical Medicine]

"As a result of the work being undertaken as part of the WHO-EMT (Emergency Medical Teams) Technical Working Group on Burns, recommendations have now been agreed by international consensus for managing mass burn casualty scenarios and this work will shortly be included in WHO resources as well as submitted for publication." [NIHR Global Health Research Group on Burn Trauma, Swansea University].

Engagement with and influence on policy was reported by four Groups where the engagement related to **other international organisations** such as the US Centers for Disease Control and Prevention, International Committee of the Red Cross and UNICEF.

3.5   Training of research and research-support staff
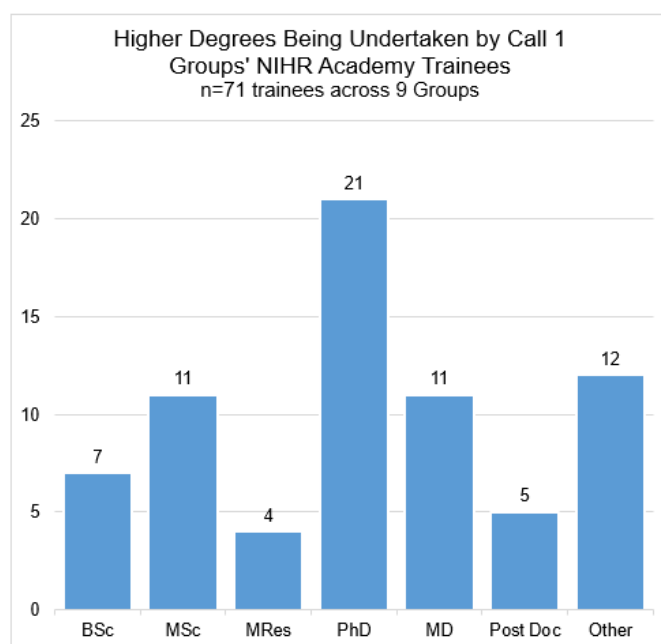
Nine Groups are funding formal trainee posts, meeting the NIHR Academy definition of an NIHR Academy Trainee[2]. A breakdown of the type of higher degrees undertaken by NIHR Academy Trainees from LMIC Groups is shown in Figure 3. PhDs are the most prevalent type of higher degree being undertaken within the Groups.

Figure 3: Type of higher degrees undertaken by NIHR Academy trainees (not all Groups included formal trainees in their programmes, given the 3-year funding time frame)

Figure 6 shows that the country with the single highest number of NIHR Academy Trainees is Brazil, followed by South Africa, India and Nepal. These countries have a high

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[2] Individual capacity strengthening is supported by the NIHR Academy for those individual 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.
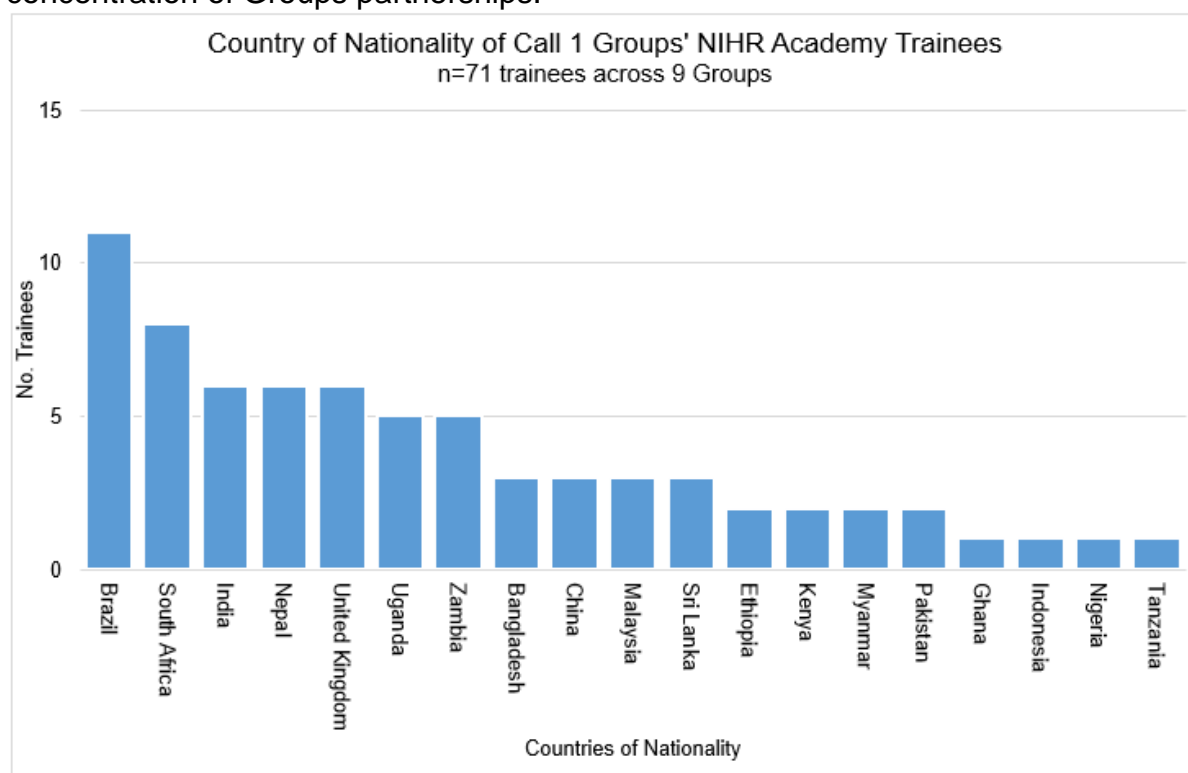
concentration of Groups partnerships.

Country of Nationality of Call 1 Groups' NIHR Academy Trainees
n=71 trainees across 9 Groups

Figure 4: Nationality of NIHR Academy Trainees

All the projects discussed training and capacity at either the individual and/or organisational level to increase knowledge around research methods and tools relevant to their project's objectives.

Building research skills with partners

14 projects reported offering **training and workshops to increase capacity and research expertise amongst their research partners**. These workshops helped staff, researchers, students, and clinicians involved in the research to gain knowledge and skills in research methods and analysis as well as in screening and diagnostic tools or health interventions. They educated partners in topics such as academic writing, consistency and ethics in research, finance management, and quantitative and qualitative methods for data collection and analysis.

These learning opportunities were offered both online through webinars and calls with mentors, and in-person through workshops, seminars, and colloquia. Individuals had the opportunity to learn more in their desired field: from neurotrauma, vaccinology, to global mental health and dementia. Projects also supported research partners to learn about statistical methods and statistical analysis software, grant writing, and systematic review methodology, amongst other research-related topics.

Six projects included **international student or researcher exchanges and collaborations**. In some cases, projects funded UK-based student researchers to visit LMIC countries and vice versa. One project supported a student in conducting their dissertation

research in Nepal whilst another Group hosted teaching weeks in the UK and invited researchers from overseas to attend.

These collaborations were often fruitful for all participating parties. Students and researchers were able to exchange knowledge and skills across continents. Offering opportunities to collaborate and learn abroad to LMIC partners was important because as one award-holder noted, postgraduate clinical training is not as readily available in LMICs as in the UK.

Supporting early career researchers to pursue advanced degrees

Supporting early career researchers to pursue advanced studies is a significant part of research capacity building for many awards. Seven projects provided support for staff and students to pursue **Master's or PhD degrees**, including learning how to conduct research, attending conferences, learning through mentorship and submitting papers to academic journals. Helping individuals pursue post-graduate education in their chosen field of study builds capacity for the entire Group. Many individuals go on to conduct important research and contribute to the global public health knowledge base.

Figure 7 shows the training needs highlighted by the Groups in response to a question requesting a list of their trainees' and wider staff's top five unmet training and capacity
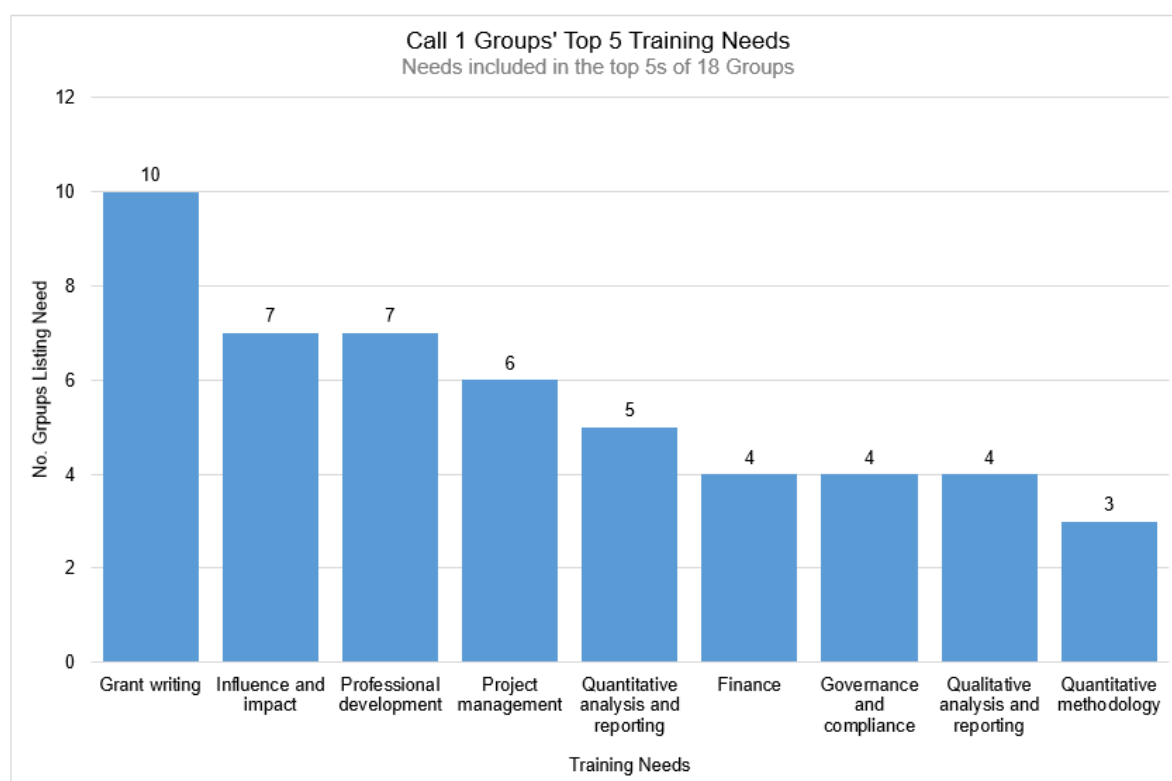
strengthening needs. The most frequently reported was grant writing (reported by 10 Groups), followed by Influence & Impact, and Professional Development (both reported by 7 Groups). This information has been shared with the NIHR Academy to inform their training offer to NIHR Academy Trainees.

Figure 7: Top training needs reported across the 18 Groups with NIHR Academy Trainees reporting in the period

3.6 Strengthening Institutional Capacity

Financial Assurance Funds activities

In 2018, NIHR launched the Financial Assurance Fund (FAF), providing an opportunity for funded Global Health Research Units and Groups to apply for additional funding for specific activities aiming to build financial management capacity in the LMIC partner organisation(s). The application process is managed by NETSCC with proposals considered through an externally appointed Funding Committee. FAF funding is 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, but with funds to be drawn from any existing underspends where available. Successful applications were required to demonstrate the ability to reduce financial risk and strengthen financial capacity in LMICs partner organisations and provide sustained outcomes beyond the end of NIHR funding.

Two Call 1 Groups were awarded FAF funding during the reporting period. Across the awards, FAF funding was used to deliver activities to support partners to prepare for Good Financial Grants Practice (GFGP) assessment and accreditation. Examples of other funded activities included training on financial management and costing research proposals, development and production of governance manuals, and accounting software purchase and training.

Other institutional capacity strengthening

Three projects helped to build institutional capacity through the **development of technology.** For example, one project developed and trained local partners in the use of road simulation software, while another established a new server so the local team could store their own data.

Some awards' activities have encouraged locally funded infrastructure developments such as the first Pulmonary Rehabilitation Centre in Georgia, a new 120-bed hospital specifically for treating snakebite victims in Gombe State in Nigeria, establishing Connaught Hospital as the centre of excellence for lower limb fracture management in Sierra Leone and a postnatal ward in Nairobi at the Kenyatta National Hospital, which has been reconfigured to provide separate care for bereaved mothers.

3.7 Equitable partnerships and thematic networks

Establishing and strengthening equitable partnerships and thematic networks are key intended outputs for NIHR global health research funding. Equity in partnership engagement was evidenced throughout the research life-cycle. All teams were required to set up equitable governance and steering groups and provide evidence that LMIC members were represented appropriately in relation to their UK counterparts and had equitable roles. Their approaches to equity often included establishing multi-way agreements and Terms of

Reference to ensure clarity and equity in roles and communication. Illustrative examples of how this was being addressed:

Projects referenced a range of mechanisms for building equitable partnerships including:

- facilitating regular meetings to stay abreast of updates and make decisions together. Most projects allowed for face-to-face meetings at least once a year and depended on video conference calls otherwise. A few projects referenced using chat programmes like WhatsApp and WeChat to communicate regularly with their LMIC partners.

- ensuring LMIC PI's and their teams were given project ownership and autonomy over research in their country

- offering lead and joint authorship on journal articles. In this way, they ensured their LMIC partners had representation in the literature and a voice on the issues within their own country.

"We have ensured that authorship of major papers is being led by junior staff from LMIC, supported by senior colleagues." [NIHR Global Health Research Group on Psychosis Outcomes: the Warwick-India-Canada {WIC} Network, The University of Warwick]

"Ownership of the cultural-comparison work is shared, and the country- specific work is owned by the team in that country. Our primary aim is to develop self-sufficient, sustainable road-safety research groups in each of our partner institutions." [NIHR Global Health Research Group on Road Safety, University of Southampton]

- collaboration with local Ministries of Health or local advisory groups to set research priorities and implementation goals.

"In Uganda, Colombia and Peru we met with representatives of the Ministry of Health, who helped us to adapt the research plans to the local context and research priorities. We hope that our early engagement with stakeholders will facilitate the dissemination plans and incorporation of the research findings into local policies if the interventions are found to be effective."[NIHR Global Health Research Group on developing psycho-social interventions for mental health care, Queen Mary University of London].

- collaborating with other LMIC and international organisations and institutions to create ties with departments within other universities, charities in partner countries, and networks of experts to share knowledge around the world.

"We have established links with the International Primary Care Respiratory Group, a charity with over 30 member countries, which aims to promote improvement of treatment for patients with lung diseases, through education & research."[NIHR Global Health Research Group on Global COPD in Primary Care, University of Birmingham]

In terms of **challenges**, a few award-holders expressed challenges in building enthusiasm and uptake in project ownership. Another challenge they mentioned was getting buy-in from

LMIC policymakers and thus converting research to practice. Some of the projects struggled with certain video calling software and upgraded to different tools that better suited their connectivity needs.

"A further challenge has been promoting communication and collaboration between our partners, which has tended to be directed through us in the UK as opposed to with each other. This is something that we wish to promote over the next reporting period, with our partners teams now established and working both to a greater level of autonomy and communicating directly with each other for guidance as needed." [NIHR Global Health Research Group on developing psycho-social interventions for mental health care, Queen Mary University of London].

3.8 Establishment of cross-cohort initiatives

NETSCC has also supported a number of cross-cohort initiatives led by the research teams themselves. Funding to support networking within themes has been supported through repurposing project underspends though an approach agreed with DHSC.

Table 2: Summary of inter-portfolio networks supported by NETSCC

	Led by	Number of partners in networks	Aims
Surgery	Universities of Birmingham (Dion Morton and Peter Brocklehurst) and Cambridge (Peter Hutchinson)	4	Learning from each other's in-country experiences, sharing of surgical resources, and evolving a common strategy for global surgical research for the future
Respiratory	University of Edinburgh (Aziz Sheikh) and Liverpool (Kevin Mortimer).	10 (+2 GCRF)	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*
Injuries and accidents	University of West of England (Julie Mytton)	4	To establish a network of expertise on injuries and accidents and emergency care. *Nuancing the need for speed: temporal health system strengthening in low-income countries*
Health economics	University of York (Mark Monahan, Tracey Roberts)	8, but could expand	Provisional: 'Establish a network of support and share common challenges; (meeting 30/1/20)
Data governance	University of West of England (Julie Mytton and Felix Ritchie)	TBC	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 summer school in Bristol for 'data governance champions'
Data governance	University of Edinburgh (Aziz Sheikh)	TBC	Planning for data governance workshops to be opened up to portfolio

Good Financial Grants Practice (GFGP)	Sanger Institute (David Aanensen, Harry Harste)	TBC	Delivery of GFGP workshop in Rwanda and online training for NIHR staff and funded Units and Groups via webinar
Implementation science	Swansea University (Tom Potokar)	TBC	Delivery of a workshop to be opened up to Units and Groups cohort.

4. Value for money

4.1 Delivery partner to summarise evidence from across awards demonstrating activities during the past year to ensure value for money in how the research is being undertaken

The NIHR Global Health Research Groups programme builds on the DFID/FCDO 4 E approach and defines good value for money as the optimal use of resources to achieve the intended outcomes. 'Optimal' being considered as 'the most desirable possible given expressed or implied restrictions or constraints'. Value for money goes beyond achieving the lowest initial price and includes consideration of Economy, Efficiency, Effectiveness, and Equity (as appropriate):

- 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.

From the application process, through to active contract monitoring, NIHR ensure that research teams fully justify how funds will ultimately contribute towards improved health outcomes for people living in LMICs and that research is contextually appropriate and generalizable in order to maximise the impact of the research for every pound spend.

Groups demonstrated that they comply with NIHR Group call remit requirements and finance guidelines through providing a full justification for all budgeted costs and demonstrating how they have addressed value for money in their project costing as part of their application. During the lifetime of the active award, teams are required to continue to provide evidence of value for money through demonstrating compliance with institutional procurement policies, providing a full justification for budget virements and/or any changes to the contracted programme of research in line with the NIHR call remit and finance guidance. Justification includes how the research remains ODA eligible, continues to provide value for money, demonstrate international best practice and will still meet the contracted awards aims. Monitoring of the active awards includes reviewing quarterly financial reports with spot checks of invoices and receipts in addition to performing due diligence checks on host and partner institutions.

Groups Annual Report responses focused predominantly on Economy and demonstrated that they comply with the NIHR spending rules, institutional policies on procurement, and international best practice. Most award-holders interpreted Efficiency as "spending well" to achieve desired project outcomes, highlighting a need for further guidance on value for money to be provided.

Whilst it is too early to assess the effectiveness of the research activities, some awards outlined their plans to assess the impact, including cost effectiveness, of their projects in the future. For example, one Group estimated the cost (£) per death prevented through their research work on vaccinations, if implemented.

Details of equity in terms of the equitable distribution of the intervention to the target population are detailed in section **Error! Reference source not found.**.

4.2 Additional research funding secured

Achieving sustainability can be supported through a variety of ways, for example through building partnerships and collaborations, by focusing on stakeholder engagement and research uptake.

Evidence that award-holders and LMIC partners are able to secure other sources of funding to continue and expand on their research activities is also an important indicator of their future sustainability. All Groups reported applying for additional funding. From the information provided in this round of reporting, around 26 external funders were identified that have awarded funds to NIHR Global Heath Research Groups. Where specific amounts were reported, these amounted - across all Groups - to around £34 million. Funds secured from some of the major funders are presented in Table 3.

Table 3: Summary of additional successful awards from selected global funders with approximate funding amounts awarded in UK pounds (including conversion from US dollars where appropriate).

Funder	Number of applications successfully awarded	Amount awarded (approximate)
GCRF (Global Challenges Research Fund) fund/GCRF+MRC (Medical Research Council)	9	~£3.3m
NIHR FAF (Financial Assistance Fund)	2	~£55,990
NIHR Programme Grants for Applied Research	2	~£5.2m
UK DFID/FCDO	2	~£9.6m
MRC	2	~£900,000
EC (European Commission) Horizon 2020	2	~£6.4m
UNICEF (United Nations Children's Fund)	2	~£215,000
NIHR RIGHT (Research and Innovation for Global Health Transformation)	1	~£3.3m
EU Joint Programme JPND (Joint Programme – Neurodegenerative Diseases)	1	~£1.6m
European Investigator Scientist Award	1	~£1.5m
Alzheimer's Research	1	~£785,000
ESRC (Economic and Social Research Council)	1	~£720,000

5.   Risk

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

Table 4 shows the five most common risks (i.e. those most often entered on the risk registers) across the Group awards, together with the most common specific subcategory for the risk entry and 3 examples of types of mitigating action for this subcategory. Since Groups may enter risk types an unlimited number of times, the number of Groups citing the risk is also given, to give an indication of spread across Groups.

Table 4: Top 5 most common risks reported in Group risk registers and annual reports

Risk	Description of the risk (number identified)	Most common subcategory (number identified)	Examples of how the risk being managed/mitigated?
1	*Data breaches / data security / data quality / data issues* (102 entries from 17 Groups)	Data quality (48 entries from 11 Groups)	• Staff training • Review sampling strategy used • Monitoring
2	*Insufficient skilled LMIC staff / resource / poor infrastructure / language barriers /operational delays / cross country organisation* (77 entries from 18 Groups)	Insufficient skilled LMIC staff (25 entries from 9 Groups)	• Staff training • Recruit skilled staff • Clear communication
3	*Recruitment / retention challenges* (59 entries from 17 Groups)	Retention – staff (21 entries from 11 Groups)	• Offer continued training opportunities • Staff involvement in cross project work • Agreed handover and notice periods
4	*Unclear objectives / outputs not achieved / lack of ownership / scientific or operational disagreement* (44 entries from 15 Groups)	Scientific or operational disagreement (16 entries from 11 Groups)	• Open discussion and communication • Clearly defined roles and scope of work • Monitoring of work progress
5	*Political / socioeconomic / cultural / technological / environmental challenges in LMIC* (36 entries from 5 Groups)	Political (12 entries from 9 Groups)	• Maintain conductive working relationships • Carefully select multiple partners and consider alternatives • Awareness of local situation using local knowledge

5.2   Challenges

Some difficulties arose through political instability (in Brazil, Georgia, North Macedonia and West Bank/Gaza) or political changes (e.g. in Nepal). Other country-specific issues included complex approval processes in China, difficulties on setting up systems at Fudan University and internet shutdowns in Ethiopia and Zambia. There were challenging issues that appeared to be common to working in LMICs and experienced by several Groups, for example, delays in funding LMIC activities (due for instance to time required for diligence processes or delays in getting collaborative agreements signed)- which can hamper the timely recruitment of staff-, delays caused by a lack of experience in the partner countries, or delays related to challenges with the delivery of equipment and consumables. Specific operational challenges reported by the Groups included problems in obtaining UK visas for researcher placements, obtaining ethical approvals in LMICs and challenges with local financial reporting and contract processes.

5.3   Fraud, corruption and bribery

Groups are contractually required to undertake due diligence on all down-stream partners and to put in place NIHR vetted collaboration agreements prior to transfer of funds. NIHR encouraged the use of Good Financial Grants Practice (GFGP) to assist institutional self-assessment against the GFGP standard.

Due diligence assessments of host and partners must include an assessment of anti-fraud/bribery/corruption and whistleblowing policies with an expectation for a zero-tolerance approach to fraud. Definitions of fraud, staff responsibilities in relation to fraud, the steps to be taken on identification of fraud, a process for the independent investigation and a disciplinary process are core requirements these institutional policies. Evidence of the existence of robust procurement policies, effective human resources with expectations of staff conduct and training, clear travel and expenses, and conflict of interest policies are further requirements.

NIHR requires evidence of the due diligence undertaken on partners, the risk rating for identified risks and the mitigation steps as contractual milestones. There is an expectation that host organisations will also undertake an independent audit of partner organisations to verify compliance. Fraud, corruption and bribery clauses in collaboration agreements are vetted by NIHR as part of active monitoring. During the reporting period, there were no allegations of fraud or financial impropriety made against any of the NIHR Groups. NIHR will continue to strengthen its guidance and support to active Groups clarifying expectations regarding Fraud reporting and investigation of any allegations to ensure open reporting of any potential concerns within the portfolio and appropriate management of fraud risks across the cohort.

5.4   Safeguarding

NETSCC have promoted the ongoing UKCDR consultation work on the International Development Research Funders' statement on <u>Safeguarding</u> at the Units and Groups cohort

meeting in May 2019 and have used the <u>DfID/FCDO enhanced due diligence for external partners</u> to support the cohort and alert teams to the increased scrutiny in relation to safeguarding. The Call 1 Groups with contract variations for costed or no cost extensions all now have a new safeguarding provision explicitly in their NIHR contracts. NIHR expectations in relation to safeguarding researchers and participants is following the above guidance and will be further developed pending the outcome of a cross funder consultation and guidance. In the meantime, best efforts are being used to help support teams understanding of requirements to implement appropriate policies and procedures to support effective safeguarding in UK and LMICs. The future annual reporting templates are being revised ahead of the forthcoming reporting round to include specific questions on safeguarding and encourage reporting on safeguarding issues. Safeguarding approaches however are being considered as part of development of our NIHR wide assurance processes and are being linked to wider GHR funders including DfID/FCDO to ensure a consistent approach is adopted.

There is evidence that Groups are thinking about these issues and developing safeguarding policies, Lone working is an issue in at least two awards and guidance has been produced for researchers involved in affected teams. Awards appear to issue guidance and policies for the individual risks they see being posed for staff specifically in their projects.

6. Delivery, commercial and financial performance

6.1 Performance of awards on delivery, commercial and financial issues

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

All Groups continue to be strongly encouraged to fully spend within the allocated funding period and to seek approval for any changes to programmes required to achieve this duly considering value for money. The majority of the reported underspends are related to initial start-up delays and the six-month milestone go/no go review process. The other delays most cited include delays in the approval and signatures of final collaboration agreements, in the transfer of funds to LMIC partners, delays in ethical approvals for studies, delays in recruiting staff members and unexpected contextual challenges.

The average percentage underspend was 28% across all the Call 1 year 2 Groups and this is a decrease of 20% from the 35% average underspend reported at the end of year 1. Based on current spend profiles, modelling predicts this will reach an average 4% underspend by end of year 3. As a result of the approved extensions in cost and/or time the Groups are broadly on track to achieve their budget spend, assuming no unexpected delays.

In this reporting period, two Groups were successful in obtaining additional funding for **FAF (Financial Assurance Fund - see section 3.7 for further details).** All were awarded ~£50k and the additional FAF funds are to be made available only if all underspends were used at the end of the project. If underspends remain then the FAF funds awarded will be reduced on a pro-rata basis.

Close financial monitoring and reprofiling of year 2 spend was undertaken and projects supported to be realistic in the profile to ensure spend profiles are as accurate as possible. This process is repeated annually. Any existing underspends are taken into account and reduced sums are provided in line with new reprofiled spend for future years. Teams are asked to confirm as soon as possible whether there is the potential for future underspend, and all were confident that underspend will continue to reduce through mitigating actions being undertaken.

6.2 Have NIHR funded awards continued to meet ODA funding eligibility

ODA eligibility is monitored at every change to programme request, in routine monitoring as well as through annual reporting questions.

6.3 Transparency: *have [International Aid Transparency Initiative (IATI)](#) obligations been met?*

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

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

The Call 1 Groups do not 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 Host Institutions to report to IATI were introduced for the majority of teams where they were successful in bidding for Costed or No Cost Extensions in late 2019. The clause will therefore come into effect from Spring 2020. Prior to this, NIHR engaged the Groups at the 2019 cohort event highlighting the importance of transparency of ODA funding and encouraging them to have discussions within their host institutions to prepare them for future contractual obligations to report to IATI.

7.   Monitoring, evaluation and learning

7.1   Award level progress monitoring

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

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

Per project:
- Financial reports (quarterly)
- Monitoring reports (6 monthly/annual/interim)
- Trainee data reports (annually)
- Independent Strategic Advisory Group meetings/ minutes
- Evidence of due diligence and ethics approvals
- Project outputs
- Email correspondence

Programme level:
- Directors and Project Manager cohort meeting outputs
- SLACK GHR U/G community engagement channel
- Site visits and in-country assurance visits to multiple partners

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

Group Annual Reports provide detailed information on progress and allow in depth monitoring against contractual milestones and deliverables. They also provide key information on community engagement, equity of partnerships, capacity strengthening, outputs and outcomes. They are used for monitoring risks and mitigations, and for ensuring effective governance, assurance and compliance. The Annual Reports also invite funded teams to give their feedback to NETSCC on areas for programme strengthening which ensures two-way learning. Depending on their complexity, reports are reviewed by at least two members of the NETSCC team. Following review, response letters are sent to project Directors highlighting particular achievements and where further information is required.

Financial monitoring

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

7.2 Evaluation

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

7.3 Learning

Examples of how learning from the NETSCC monitoring approach has helped with programme improvements include:
- modifying and clarifying NIHR guidance to funded teams
- informing content for new funding calls
- identifying more streamlined and efficient way to capture data
- informing considerations for the future assurance visits process

NIHR encourages funded Groups to learn from one another through their research collaborations and by the sharing of research experiences. Mechanisms through which this is achieved include webinars, cohort meetings and Slack. In May 2019, NETSCC ran a three-day learning exchange event in Birmingham for the Directors and Project/Finance Managers of the current funded cohort of 13 Units and 40 Groups. The learning from the 2019 event was summarised into a cohort meeting report and included actions for NIHR on topics such as reviewing the position of maternity pay in LMIC contexts, and considering whether the current contractual clauses regarding ownership of research data and Intellectual Property needed updating. Both areas have now been actioned and outcomes shared with the Group Directors.

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. This year 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, hosted by an NIHR Global Health Research award-holder.

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

Collaboration Agreements learning points include:

- The process of completing Collaboration Agreements and sub-contracts is time consuming and complicated and splitting multi-partner agreements can minimise contracting delays.
- Groups recommend ensuring that all parties are clear on their roles and responsibilities before negotiations begin and agree named contacts at each site to liaise with on agreements.

Data Governance learning points include:

- Understanding data governance regulation and practice in different contexts and what is possible where there is no legislation. General Data Protection Regulation (GDPR) provides a benchmark for good practice for host institutions working in low resource settings.
- The principles of strong data governance aren't always well understood within LMIC partners organisations, and this is a developing area of understanding globally in the global health research landscape. As a consequence, a number of training workshops have been planned or delivered by some Groups.
- LMIC regulations and infrastructure may prevent or restrict the transfer and/or storage of local data beyond LMIC borders. Issues with data quality have also been reported, although these can be addressed through adopting recognised global standard systems

Ethics process learning points include:

- Understanding the requirements for ethics approval, regulatory approval, governance and sponsorship issues in different LMIC contexts at the start of the programme and to factor in time for delays in approvals and costs for ethical approvals (at least one month is recommended).
- Challenges may be minimised through (i) training to support capacity for setting up international research studies (ii) supporting capacity for local ethics and internal review boards in more rural settings and (iii) through the set-up of a UK global ethics board.

Staff recruitment learning points include:

- Start recruitment as early as possible and plan for potential delays during the recruitment process, which arise either through a lack of immediately appointable applicants or through HR contract procedures.
- Use networking and international recruitment sites to increase the pool of potential applicants to help ensure the right candidates apply.

Partner and project management learning points include:

- There is value in developing a log frame or Theory of Change feeding into a monitoring and evaluation framework and linked to quarterly activity reports for all work-packages.
- Partner relationships require a dedicated project manager to ensure robust quality systems, coordinate regular project management meetings, communications and monitor progress.

- Active monitoring through onsite staff, site visits and dialogue with project officers/managers is vital. Visits particularly aid understanding of contextual issues and shared understanding of the needs to be addressed and can minimise impact of competing priorities.
- Consider potential for political and environmental instability in LMIC contexts and identify cultural barriers including local holidays/festivals on timeframes which may impact on timelines.
- Consider optimal locations for meetings to avoid delays in obtaining visas, which can hinder attendance.

Language and Communications learning points include:

- Zoom is the most recommended platform for remote meetings where robust audio is vital; WhatsApp is useful for day to day team connectivity.
- Arrange access to English language training for LMIC colleagues/students where necessary, and particularly considering this in advance for those registering for PhDs with UK Higher Education Institutes.
- SLACK is a useful resource particularly discussion threads but there is a need to keep learning on items threaded together, or a means to store uploaded documents which is more easily accessible.

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

- Maintain a high degree of engagement and communication with patient groups, policy makers, health care providers and communities throughout the research process, to ensure their continued engagement.
- On engaging with Ministries of Health: share evidence to encourage policy change.
- Ensure plans for CEI include the involvement of CEI groups in the full coproduction of research activities, in order to generate a positive local impact. Consider the composition of the group (educational backgrounds, ages) carefully, as this may affect participation.
- Senior team members need to be seen to engage in stakeholder engagement activities.

Financial management learning points include:

- Ensure dedicated and embedded finance manager, administrative support and programme manager support is available.
- The Financial Assurance Fund has helped address identified gaps in financial capacity and strengthen financial monitoring capability in the reporting period. Consider the costs required for GFGP self-assessment and accreditation.
- Institutions are often required to facilitate pre-financing for LMIC partners - at their own risk - to reduce delays in recruitment and start up.
- The finance and project management webinars provided an opportunity for teams to network with other teams and to ask questions on a range of project management and financial matters.

- The need for institutional standard operating procedures and due diligence on partners pre-award to shorten start up delays. There is a need for training on using the standardised finance reporting template and for support from the host institution regarding quarterly reporting requirements.
- The need to develop and share successful strategies and approaches that ensure value for money in procuring equipment and consumables; separately considering the need for customs documentation when importing goods.
- The need to anticipate delays in transferring funds from UK to LMIC partners; UK finance teams should provide a proof of payment reference to local PIs to prevent delays in receipt of payments by international partners.
- The need to raise issues regarding reallocation of underspend with NIHR well in advance via a formal NIHR change to programme process.
- Exchange rate losses have caused issues and should be considered in advance of signing contracts. NIHR has issued advice to teams on exchange rates and the losses can be minimised for instance where institutions have a separate account in the named currency e.g. British £.
- The need to factor in costs for translations of project documents e.g. questionnaires, or to have translators at meetings.

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 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 influencing policy and practice through effective stakeholder engagement (ahead of contract end dates in March 2021).

Assurance and risk management processes are continuing to develop and are incorporating learning from DfID/FCDO and UKRI. In 2020, a programme of selected in-country assurance visits are planned to begin, these will provide opportunities to provide in-country presentations to share learning and best practice. Learning from assurance visits will be collated and key points shared to inform development of best practice and improved guidance. Documents to underpin visits were drafted in the period and will be tested and further refined along with guidance on undertaking visits for future teams.

8. Diversity and environmental sustainability

8.1 Summary of activities that have taken place to ensure everyone is treated fairly, regardless of gender, gender identity, disability, ethnic origin, religion or belief, sexual orientation, marital status, transgender status, age and nationality, across this funding call.

The Groups call guidance sets out clear expectations for equity within research teams, and that participants and communities will be engaged through research in a way that ensures consideration of diversity and a focus on the health and well-being of the most marginalised and vulnerable groups in LMICs. While not all protected characteristics are specifically monitored, NIHR have been focussing on ensuring a consistent approach with other ODA funders, for example, on how awards assess and address issues of gender, inequality in research teams, research participation and community and stakeholder engagement. Awards are required to provide data on gender, nationality and those people identifying with having disabilities within their research teams and research activities. Where marked gender imbalances are observed by NETSCC, awards are encouraged to readdress the balance in line with ODA funding expectations. There is evidence teams are working towards finding solutions for engaging different protected characteristic groups within their research teams (such as covering costs of childcare to enable female early career researchers to participate), and engaging the most vulnerable or marginalised people in their research activities (see CEI section above).

8.2 Summary of activities that have taken place to minimise carbon emissions and impact on the environment across this funding call.

NIHR provide guidance to Groups setting out the expectation that sustainability will be addressed in the awards, both in terms of research and capacity strengthening as well as environmental impact. Sustainable environmental solutions are strongly encouraged and supported as part of the approach to ensuring value for money, for instance using local suppliers and video conferencing. Sustainability question sets have been reinforced for next year's reporting to ensure the importance of this aspect is strengthened yet further.

At the 2019 cohort meeting, it was clear funded teams were highly aware of the potential impact of their work on the environment, specifically around the need to travel across partner countries. Teams shared their own experiences at the event, and the NIHR Carbon reduction guidelines have since been highlighted. NETSCC have encouraged teams through financial and other guidance to give strong consideration to ways to reduce carbon emissions and lessen environmental impacts through minimising air travel, utilising video conferencing and virtual meetings and technology, use of local suppliers and other ways to ensure value for money across the portfolio.