Department of Health & Social Care

# NIHR Global Health Research Units – Call 1

# Annual Review – Year 2

Published December 2020

**NIHR Global Health Research Portfolio**

# Contents

# Annual reporting and review process

This annual review comprises a summary of the Call 1 Unit's portfolio 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 partner NIHR Evaluation, Trials and Studies Coordinating Centre (NETSCC) responsible for delivering a funding scheme (NIHR GHR Units) 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 Units 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 Units 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 template - **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.

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

This report specifically focuses on the Units 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 12/13 awards to be on track with their overall delivery, and 1/13 to have an amber risk to their overall delivery. Four Units had experienced major concerns or issues in the reporting period but had worked with NETSCC to get plans back on track. NETSCC have granted change requestsfor 11/13 awards to help address underspend and, with mitigation measures in place, expect that Units are on track to reduce their underspend to 5% (on average) in year 3. NETSCC will keep this level of expected underspend under close review by providing updates ahead of monthly Programme Management Meetings (PMMs) with DHSC.

Many of the Units have shown a wide range of Community Engagement and Involvement (CEI) activities, including using CEI specifically to coordinate activity and outputs, prioritise and plan research activities. A number of the projects have also demonstrated positive examples of changing project plans as a result of CEI (11) and have adapted to the local contexts and needs of vulnerable groups.

The most commonly reported outputs included journal articles, presentations, conference abstracts and training materials. In addition, some Units have been creative in their efforts to communicate with the public, reporting use of their own website or social media to share their research progress. A number of the Units reported new technological advances including new diagnostic tests or tools, medical devices, software development and service innovations (14).

A wide range of early outcomes were reported across the cohort. For example, the majority of Units demonstrated engagement with and influence on policy and practice at national and international levels. This included reference to building of health service capacity, training of healthcare workers, improving quality of care and systems strengthening. All projects have engaged with local LMIC policymakers and other key stakeholders, both to develop the research programme in line with local contexts and needs and to maximise the impact and uptake of the research at the dissemination stage. Many Units also demonstrated indications of early impact such as healthcare workers trained in diagnostics, user behaviour data informing health care models and development of training packages for palliative care services (16).

All of the Units demonstrated good training and capacity strengthening at individual and/or organisational level. Over this reporting period, there were a total of 226 trainees across both UK and LMIC institutions. At organisational level, this included offering training and workshops to increase capacity, 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. Five Units during this reporting period successfully secured Financial Assurance Fund (FAF) Awards to support financial management capacity building (22). At the individual level, Units have offered research and professional development for students, researchers and clinicians through formal higher education courses, workshops and online training opportunities (20).

### **1.3** Performance of delivery partners

Year 2 of the Global Health Research Units 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 Units. Where any complex, financial or sensitive challenges are experienced, NETSCC have

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

NETSCC 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 Units 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 Units level regarding financial management, capacity strengthening, data governance, partner and project management and stakeholder engagement among others. These have been shared widely across the existing cohort of Units and Groups and have also been considered and included in guidance documents for new calls in the Global Health Research portfolio to help applicants build these considerations into their applications and planning timeframes. The lessons learned have helped the NIHR GHR Programme to provide better guidance to teams regarding future efficiency and ensure successful team-working. Across the cohort there is continued demand for detailed updated information on NIHR financial requirements at regular intervals. Opportunities to present on finance reporting requirements, 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 detailed annual milestones (in line with original agreed project aims and objectives) against which they can be monitored by NETSCC as part of the annual review. A formal process for this has been introduced at contracting stage of new Global Health Research contracts, which allows for robust monitoring from the outset.

Another key learning point includes improving the format of the internal summary of monitoring activity, efficiently linking financial performance, 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 requirements.

Training opportunities and capacity building have become an increasingly important part of the NIHR offer. Many of the Units 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, the number of formal trainee positions for each Unit varied significantly across the cohort. Call guidance for Call 2 of Global Health

Research Units includes a requirement for a minimum of 10 academic training posts to be included in the application.

Recognising that the Units had not necessarily included enough resources for financial management and assurance in their original applications, NIHR launched the Financial Assurance Fund, open only to existing NIHR Global Health Research Units and Groups. Cumulatively, 6 Units have been successful as securing additional funds specifically to strengthen their LMIC partners' financial management capacity. NIHR have strengthened the call guidance for new programmes in regard to costing resources appropriately and expectation for including institutional capacity strengthening activities.

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

| Recommendation | Owner | Timeline |
|---|---|---|
| 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. |
| Present Units' 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 reporting template (and consider revisions). Tailor Annual Report templates to directly match MEL requirements (including safeguarding). | NETSCC/DHSC | Schedule meeting in May/June 2020 |
| Strengthen guidance to award holders on expectations regarding Fraud reporting. | NETSCC | By next annual report submission |
| Strengthen guidance to award holders on Value for Money and the 4 Es | NETSCC | By 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 Units were**:

1) To support UK institutions with an international track-record to undertake high quality applied health research relevant to the needs of low-and middle-income countries

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 strengthen existing 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 and to extend 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)

This report focusses on the activities of the 13 Units funded, over the second year of their four-year contracts. The individual aims of each of the 13 Units funded are set out in Table 1. A full list of all funded projects can be found on the NIHR Funding Awards page.

*Table 1 - Aims of the Call 1 NIHR Global Health Research Units*

| Title | Principle Investigator | Aims | DAC-List Partner countries | |
|---|---|---|---|---|
| NIHR Global Health Research Unit on Health in Situations of Fragility at Queen Margaret University, Edinburgh | Ager, Alastair | To deliver a systematic programme of research that identifies means of strengthening service quality, accountability, access and uptake in two regions, West Africa and the Middle East, characterised by significant but contrasting patterns of fragility. The Unit's focus is on mental health and psychosocial support (MHPSS) and the treatment and prevention of non-communicable diseases (NCDs). | Lebanon | Sierra Leone |
| NIHR Global Health Research Unit on Global Diabetes Outcomes Research, University of Dundee | Palmer, Colin | The programme will establish the partnership of the Dundee group with the Madras Diabetes Research Foundation in Chennai with the training of a new generation of big data analysts in the analysis of linked molecular and clinical data, including the deep data mining of imaging and clinical datasets. This coupled to the existing advanced clinical management systems in both centres will accelerate the adoption of the big data revolution into real life personalized care in diabetes and related morbidity. | Afghanistan<br>Ethiopia<br>India | Nigeria |
| NIHR Global Health Research Unit on Respiratory Health (RESPIRE) at The University of Edinburgh | Sheikh, Aziz | A UK and low- and middle-income country (LMIC) partnership that aims to improve respiratory outcomes from common communicable and non-communicable disorders. | Bangladesh<br>India | Malaysia<br>Pakistan |
| NIHR Global Health Research Unit on Genomic Surveillance of Antimicrobial Resistance, Wellcome Trust Sanger Institute | Aanensen, David | Intelligent global surveillance of bacterial pathogens using whole genome sequencing through appropriate sampling and analysis in sentinel surveillance sites within strategically relevant countries. | Philippines<br>Nigeria | Colombia<br>India |
| NIHR Global Health Research Unit on Neglected Tropical Diseases, BSMS | Newport, Melanie | • To improve our ability to diagnose, prevent and treat podoconiosis and develop tools to prevent mycetoma where there is no effective treatment.<br>• To strengthen the ability of low-income countries to respond to scabies outbreaks. | Ethiopia | Sudan |
| NIHR Global Health Research Unit on Tackling Infections to Benefit Africa, The University of Edinburgh | Woolhouse, Mark | To reduce the burden and threat of infectious diseases in Africa by informing and influencing health policy and strengthening health systems. | Belgium<br>Botswana<br>Congo<br>Ghana<br>Kenya<br>South Africa | Sudan<br>Rwanda<br>Tanzania<br>Uganda<br>Zimbabwe |
| NIHR Global Health Research Unit on Lung Health and Tuberculosis in Africa at LSTM | Mortimer, Kevin | To improve the health of children and adults in Africa through multi-disciplinary applied health research on lung health and TB. | Cameroon<br>Ethiopia<br>Ghana<br>Kenya<br>Malawi<br>Nigeria | South Africa<br>Sudan<br>Tanzania<br>Uganda |
| NIHR Global Health Research Unit on Mucosal Pathogens | Heyderman, Robert | To address the limitations in long-term effectiveness of current vaccines in LMICs, this Unit aims to reduce | Gambia<br>Ghana | South Africa |

| | | | | |
|---|---|---|---|---|
| (MPRU), University College London | | mucosal pathogen carriage & transmission to protect against life-threatening endemic/ epidemic disease. | Kenya<br>Mali<br>Malawi | Uganda |
| NIHR Global Health Research Unit on Health System Strengthening in Sub-Saharan Africa, King's College London | Prince, Martin | Healthcare across sub-Saharan Africa (SSA) reaches too few of those in need and does not achieve the best possible results. Resources are limited, so non-specialists provide most treatments. In this context, improving healthcare is challenging, but essential to progress. The Unit aims to improve delivery and outcomes of continuing care. | Ethiopia<br>Sierra Leone | South Africa<br>Zimbabwe |
| NIHR Global Health Research Unit on Diabetes and Cardiovascular Disease in South Asians, Imperial College London | Chambers, John | • Strengthen disease surveillance for type-2 diabetes and cardiovascular disease to assess needs, priorities and performance.<br>• Prioritise interventions for prevention, early detection and management of type-2 diabetes and cardiovascular disease, taking account of efficacy, scalability, sustainability and equity.<br>• Develop capacity at Centres of Excellence, in regional Translational Research Networks, and through high-quality training.<br>• Support frameworks for dissemination and implementation (policy, guidelines, pathways, standards) | Bangladesh<br>India<br>Pakistan | Sri Lanka |
| NIHR Global Health Research Unit Action on Salt China (ASC), Queen Mary University of London | MacGregor, Graham | A UK and low- and middle-income country (LMIC) partnership that aims to reduce salt intake amongst the poorest and most vulnerable populations through research and public health programmes. | China | |
| NIHR Global Health Research Unit on Global Surgery, University of Birmingham | Morton, Dion | To create a sustainable platform where patients and surgeons from LMICs can identify priority areas, perform studies to find solutions, and find ways to bring these solutions to their patients. This will initially focus on surgery of the abdomen but will cross over into other neglected areas of surgery, including women's health and cancer treatment, within the 4yr period. | Ghana<br>India<br>Mexico<br>Nigeria<br>Pakistan | Rwanda<br>South Africa |
| NIHR Global Health Research Unit on Improving Health in Slums at University of Warwick | Lilford, Richard | A UK and low- and middle-income country (LMIC) partnership that aims to improve health services in slums within LMICs. | Bangladesh<br>Kenya | Nigeria<br>Pakistan |

## Global Health Research themes across the 13 funded NIHR Units

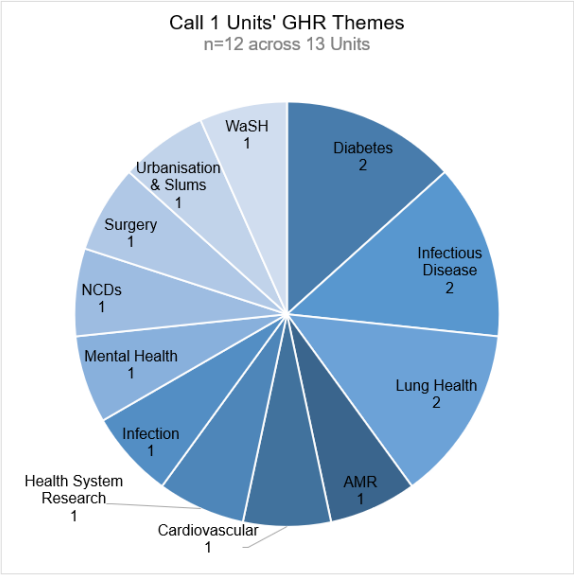


Figure 1 shows the number of themes across the 13 Units. Themes are based on individual Unit awards HRCS classifications and then grouped into broad related themes.

*Figure 1: Number of GHR themes across the 13 NIHR Units funded.*

### Global geographic distribution of Unit awards in LMICs.

Figure 2 shows the global geographic distribution of Unit awards in LMICs. 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 Unit awards in LMICs can be found in India and South Africa.

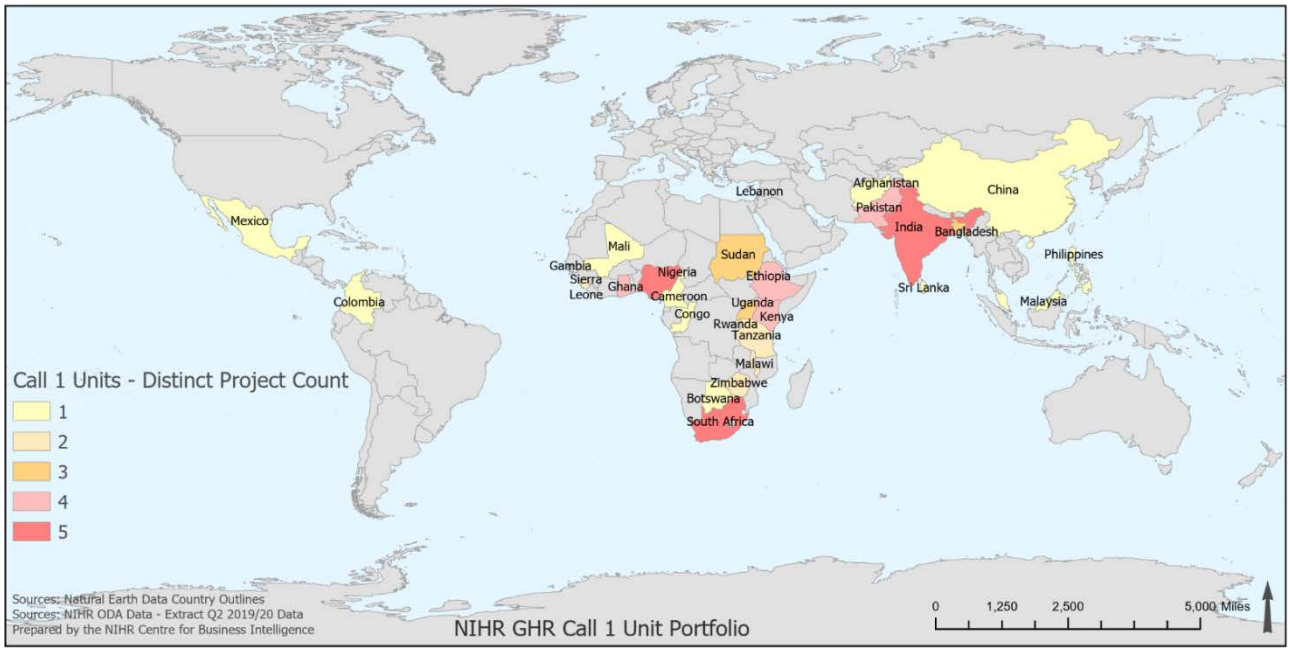


*Figure 2: Heat Map showing location and number of LMIC Unit awards*

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

NETSCC actively monitor the performance of each Unit and on a quarterly basis use a (Red/Amber/Green) RAG rating system to rate each Unit's progress in terms of overall delivery and financial performance. In terms of rating for overall delivery, out of the 13 Unit awards, one was rated amber, having experienced significant delays. However, this Unit secured approval for changes to their funded programme to address the delays, agreed with NETSCC as part of active project monitoring. The remaining 12 Units were rated green in terms of overall delivery. Four awards had experienced major concerns or issues in the reporting period but had worked with NETSCC to get plans back on track.

Across all Units, nine were rated as an amber risk in terms of financial performance in the period (reporting underspend ranging from 36-55%). The other four Units had relatively low levels of underspend (3-24%). 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 with mitigation measures in place, it is expected that Units will reduce their underspend to no more than 5% in year 3.

## 2.3 Community Engagement and Involvement (CEI)

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

Four Units reported specific details on activities relating to the identification and inclusion of vulnerable and/or at-risk groups, for instance:

> "Our Unit has had a positive societal impact on the communities that we are working with as part of this research. Our researchers have been welcomed into communities and slum dwellers are keen to share details of their healthcare needs so that they can contribute to the development of future services" [NIHR Global Health Research Unit on Improving Health in Slums at University of Warwick]

*(b) Participation and two-way Communication*

The types of engagement activities communities or patients were involved in covered all aspects of the research process. Four Units reported on using CEI specifically to coordinate activity and outputs, prioritise and plan research activities, and develop study protocols and plans.

> "Following the joint design of activities, research teams convened eight participatory workshops to explore issues affecting access and utilization to chronic and mental health care among vulnerable Lebanese and Syrian refugee populations resident in the Greater Beirut (urban) and Bekaa (predominantly rural) areas of Lebanon. Our workshops helped surface substantial challenges in the navigation of current health care services and structures by both Lebanese and Syrian populations"; community members highlighted issues they themselves had faced but also those faced by their wider communities. The authenticity of accounts shared with the research team was both encouraging as well as deeply troubling: female participants we spoke to highlighted issues of gender-based violence and spoke at length of protection concerns relating to another particularly vulnerable group - children. Participants additionally reflected on disability and the stigmatizing view attached to this, an often-neglected topic in this type of research, but which participants themselves noted as absolutely critical for further work." [NIHR Global Health Research Unit on Health in Situations of Fragility at Queen Margaret University, Edinburgh]

Five Units mentioned specific outreach events or ways of using websites, newsletters and films to engage the public. A team working in South Asia on diabetes and cardiovascular disease reported that:

> "we have developed an animated video for the general public in the four countries [Bangladesh, India, Pakistan and Sri Lanka] to understand the purpose of the Unit and its work. This is part of our effort to engage local community members and allow tools for local leadership to advocate for participation in the project." [NIHR Global Health Research Unit on Diabetes and Cardiovascular Disease in South Asians, Imperial College London]

(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 order to ensure long-term, sustainable change, it is important for the local community to voice their local concerns and for them to contribute in defining local healthcare challenges. This helps give communities a sense of responsibility and ownership of the solutions.

Five Units reported on issues of ownership, empowerment/strengthening community engagement, adaptability and localization. Two of these Units have been looking at practical ways to improve ownership, such as by using art competitions to disseminate salt reduction knowledge in the local context. A third has been looking at the role of community organisations in strengthening community engagement with health provision, whilst the fourth established a specific working group to explore ways of promoting equity in low resource contexts, focus on the role of CEI and develop appropriate equity indicators.

"Local context has a major impact on the participation of men and women. In Pakistan and Bangladesh, engagement of women in the research can be challenging, but is overcome by having dedicated facilities (or sessions) for women, where they are seen by female only staff. In contrast, in Sri Lanka and India, engagement of men is harder, as they place their main focus on their employment. We overcome this by adopting approaches that more actively engage with men, approaching employers to release their workers for health assessments / interventions and by making sessions outside the working day (evenings and weekends)" [NIHR Global Health Research Unit on Diabetes and Cardiovascular Disease in South Asians, Imperial College London]

In addition to CEI activities, many Units conducted qualitative research with patients and staff in order to incorporate data on attitudes and experiences into their NIHR-funded research, including participation in health economics research exercises.

UK-based activities in the CEI space were also reported. One Unit has established a UK-based Public Advisory Group with members from LMICs, or individuals with substantial experience of living in LMICs and an interest in surgical health care. This group will advise on public facing materials (e.g. webpages, study protocols) and on building relationships and communicating with individuals in LMICs.

# 3. Outputs and outcomes

## 3.1 Research outputs

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

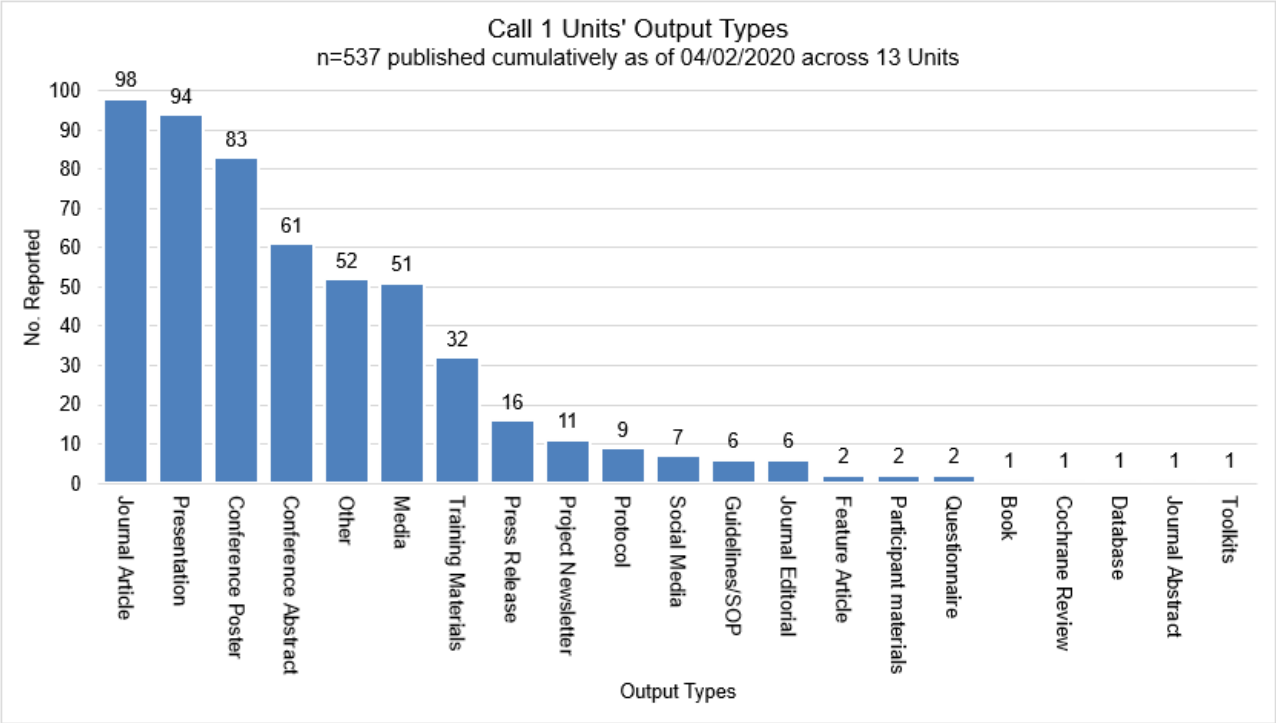


*Figure 3: Number of outputs by type of output*

The most commonly reported output were journal articles, closely followed by presentations (including to non-academic audiences) and conference posters. General media work (including press releases) is also a common feature of Unit activities.

Eleven Units reported communicating their research findings to the wider academic community at **conferences.** Many did presentations or led workshops at conferences, some submitted abstracts or presented their research at meetings. Three projects specifically mentioned that they used their **own website or social media** to share their research progress with the public in this reporting period. One created a short video for their website while another mentioned writing impactful tweets on Twitter to share their research findings. Another Unit reported using the **arts and media** to share information and generate interest in their work.

Eight projects reported on output innovations in this reporting period, for example new diagnostic tests, medical devices, registering of patients, software development, new toolkits and service innovation. Four projects said they had created **new technology or a therapeutic tool** to be used in interventions. These projects have created real life or online tools that can be used to improve health and prevent illness or injury. For example, one

project developed a mobile phone application that helps the user to reduce salt intake in China. Another created a device to deliver oxygen to children with severe pneumonia in Bangladesh, whilst a third project created a mobile device application for depression care in Ethiopia.

Three projects created a **diagnostic test or tool**. These projects devised and tested more affordable and more accurate ways to diagnose conditions like pneumonia (see example below), conditions associated with leg swelling, and mental health pathologies.

"As part of the 'Chest X-ray' project being led by our Partners in Bangladesh, a computational model is being developed to diagnose pneumonia directly from clinical grade paediatric chest X-rays. Using recent machine learning advances in the field of computer vision, it is hoped to achieve a diagnostic performance comparable to that of a trained radiologist. There are further plans to develop this diagnostic computational model into a software package, thereby enabling individuals unfamiliar with programming to interact with the model." [NIHR Global Health Research Unit on Respiratory Health (RESPIRE) at the University of Edinburgh]

Four projects created a **survey or questionnaire.** These projects worked on both the design of the survey questions to meet their research goals as well as creating electronic versions of the surveys that could reach many people around the world and provide the richest data possible for disease areas like respiratory disease and hard-to-reach places like slum dwellings. Another award-holder reported that they developed a participatory assessment tool for mapping social connections.

## 3.2 Lead/senior authorship of outputs

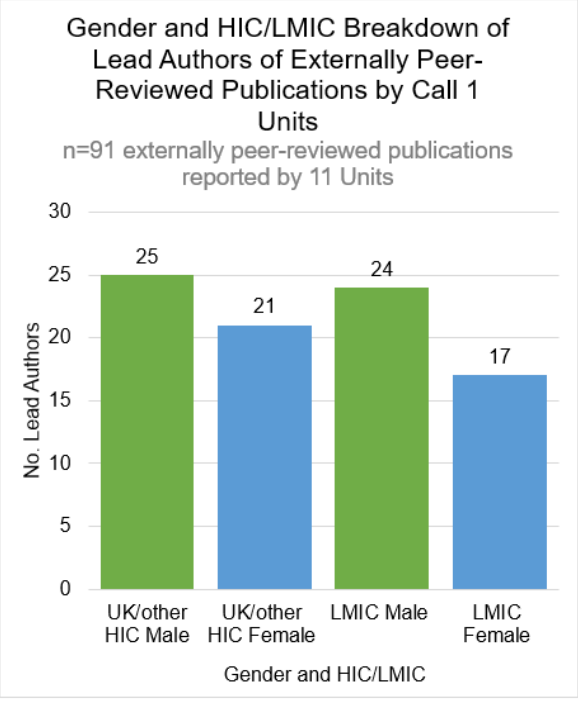


Figure 4 shows the breakdown of externally peer-reviewed publications by location (LMIC vs UK institution as lead author) and gender. 46 peer-reviewed publications originated in High Income Countries (HICs) and 41 in LMICs, i.e. lead authorship is almost evenly balanced between UK/other HIC and LMIC. As a proportion, there were slightly fewer women as lead authors than men in both types of locations, with the gender imbalance slightly more evident among LMIC externally peer-reviewed publications (women accounted for 41% of first authorships in LMICs compared to 46% in HICs).

*Figure 4: Number of peer-reviewed publications by location and gender*

## 3.3 Outcomes

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

### 3.3.1 Influence on practice

Most activities designed to influence impact were directed at the practice level and at the policy level. At this point in time, many of these activities can be viewed as steps towards impact.

Nine Units provided concrete examples demonstrating **engagement with and influence on practice** at *national and international levels*. Some examples relate to the training of health care staff to improve skills and as a result the quality of care to patients in LMICs:

> "We are currently partnering with the Western Cape Department of Health to improve routine screening, develop referral systems and train lay health workers to provide care to perinatal women with mild to moderate symptoms of depression, anxiety and experiences of violence" [NIHR Global Health Research Unit on Health System Strengthening in Sub-Saharan Africa, King's College London]
>
> "Hands-on onsite bespoke training on research management and surgical studies have been provided in Ghana, Rwanda, Nigeria and India. These training sessions have seen huge enthusiasm from the healthcare professional[s] in these countries." [NIHR Global Health Research Unit on Global Surgery, University of Birmingham]

One Unit estimated their skills training relating to the correct diagnosis of malaria had benefitted 500 healthcare workers in Ghana and a further 63 in Khartoum State. Another Unit is looking to evaluate the effectiveness of the development of clinical skills among healthcare workers.

Another example of direct influence on practice is the case of equipping local public health teams with the skills to analyse food poisoning outbreaks:

> "The Lead Principal Investigator at the Philippine Surveillance Unit (RITM) […]lobbied the government to insist that whole genome sequencing (WGS) be used to investigate hundreds of people falling ill at an event […].Working together with stakeholders at the Food and Drug Administration, RITM analysed bacterial isolates derived from food (egg) samples served at this public event to determine the outbreak vehicle. Crucially, this is the first food-borne outbreak in the Philippines where samples will undergo WGS – and this will be presented as a case study to the Department of Health to illustrate how valuable WGS could be when applied to the investigation of such outbreaks in the future". [NIHR Global Health Research Unit on Genomic Surveillance of Antimicrobial Resistance, Wellcome Trust Sanger Institute]

Tools to improve the **quality of care** and **systems strengthening** have been reported:

"[In South Asia] we are developing a digital "Care co-ordination" platform to facilitate health data collection, clinical decisions and non-communicable diseases pathway implementation by the primary healthcare teams. Tools are being developed in partnership with local stakeholders" [NIHR Global Health Research Unit on Diabetes and Cardiovascular Disease in South Asians, Imperial College London]

One Unit reported mapping healthcare facilities on offer to particularly hard-to-reach but in-need communities living in informal settlements in Nigeria and Bangladesh, which will be able to feed into the development of new health care models.

In another Unit's programme, an initial palliative care rapid situational analysis among Rohingya refugees living in temporary settlements in Bangladesh is feeding into the development of training programmes for those providing palliative care services.

One project explained how growing their network had led to other organisations taking actions around salt reductions, and how this had helped to spread the project work beyond the regions which were originally proposed in the funding application.

"We have established partnership with the Chinese Nutrition Society (CNS) by contributing our Unit's experience to CNS's national program on salt reduction. CNS has been requested by China' s National Health Commission to take action on salt reduction, including developing core messages on salt and health for the public, and we have been engaged by CNS to be part of the working group." [NIHR Global Health Research Unit Action on Salt China (ASC), Queen Mary University of London]

Three Units were able to give specific examples of efforts to directly **influence individual or community behaviour**, for example:

"During the 12th "World Salt Awareness Week" on 4-10 March, 2019, in response to World Action on Salt and Health, our Unit's partners launched a nation-wide media campaign to remind the public that 'Salt is hidden in most foods you buy from restaurants, cafes and takeaways, as well as supermarkets", and "You could ask for less salt when you eat out of home'. In March 2019, our WeChat 'Salt and Health' was officially launched. WeChat is the most popular social media in China. Through this WeChat platform, weekly articles on salt are being tweeted to the public." [NIHR Global Health Research Unit Action on Salt China (ASC), Queen Mary University of London]

One Unit estimated approximately 1 million people in communities in Ghana had been reached via radio and print media, community durbars (a platform for communities to discuss and implement developmental projects), community outreach talks and school outreaches, and had benefited from the knowledge disseminated through the research programme. This Unit also attempted to quantify the number of people directly benefitting from their research activities: 313 children received treatment for schistosomiasis in Botswana, and potentially the entire population of Rwanda (12 million people) benefitted from the malaria management and the RapidSMS system that was implemented. Furthermore 400 malaria patients in Khartoum State were reported to have benefitted from

the accurate diagnosis of malaria, 13,348 residents in Tanzania reportedly benefitted from mass drug administration regarding lymphatic filariasis, 67 study participants in Zimbabwe were reported to have directly benefitted from the detailed investigation of their auto-immune conditions, and 1300 pre-school and school-aged children in South Africa were made aware of their schistosomiasis and soil transmitted helminths infection status.

### 3.3.2 Influence on policy

12 Units reported specific details of activities involving engagement with, and influence on, policy. All these Awards stressed the importance of **engaging with LMIC policymakers and other stakeholders** both to develop the research programme in line with local contexts and needs and to maximise the impact and uptake of the research at the dissemination stage.

*Sub-national and national level*

There is considerable cross-over between sub-national and national level activities. For example, the **mapping** of non-communicable diseases (especially hypertension and diabetes detection and management) and mental health service provision in Sierra Leone and the Lebanon has been undertaken from the perspective of central policy makers *and* district health providers (and local communities). Four specific examples of engagement with **local policymakers** and stakeholders at the sub-national level could be identified, including the following example (which is also an example of Community Engagement and Involvement work):

> "Our research [on improving heath in informal settlements] has continued to be welcomed by communities, health practitioners and policymakers with many members of the community taking part in data collection activities in Kenya, and mapathons and ground-truthing in Kenya, Nigeria, Pakistan and Bangladesh." [NIHR Global Health Research Unit on Improving Health in Slums at University of Warwick]

Several award-holders raised the importance of engaging local policymakers in LMICs **through the LMIC partners** as they are well placed to identify and specifically target the right contacts:

> "[We] are in discussion with our partner in Mali regarding how best to engage The Ministry of Health in Mali. One of our partners in Kenya is leading a project in Nigeria, and their policy engagement objective in their project includes targeting members of the Nigeria National Immunisation Technical Advisory Group, the National Immunisation Programme, the Nigeria Centre for Disease Control, and local paediatricians and public health practitioners. Another of our partners in Kenya leading a project in Kenya has the chair of the National Immunisation Technical Advisory Group and the head of the national immunisation programme in Kenya as co-applicants on their research proposal". [NIHR Global Health Research Unit on Mucosal Pathogens (MPRU), University College London]

Five projects mentioned **attending meetings to strengthen or grow their network of partners**. They met with key stakeholders, organisations and policymakers, often initiating cross-cutting discussions and informing research priorities.

In terms of activities at the national level, seven Units were able to report **policy briefs, evidence of direct policy influence and input into national guidelines**, for example:

"We have been involved with the development of national guidelines for the management of hypertension and diabetes patients. We are currently working with the Ministry of Health to set research priorities for non-communicable diseases in Bangladesh" [NIHR Global Health Research Unit on Diabetes and Cardiovascular Disease in South Asians, Imperial College London]

"Policymakers and practitioners are particularly interested in the results from our research projects that address the vaccine against pneumonia because this information can improve efficacy, reduce cost, and increase access to these life-saving vaccines... Examples of policy decisions that might be influenced by our work include improving vaccine schedules and improving access to vaccines by lowering cost per dose". [NIHR Global Health Research Unit on Mucosal Pathogens (MPRU), University College London]

The Global Surgical Guidelines for Prevention of Surgical Site Infection, to be published by NIHR Global Health Research Unit on Global Surgery, provides practical steps for hospitals to reduce avoidable infections and the spread of antimicrobial resistance:

"We have launched our first guideline and will be publishing it shortly. We are engaging with stakeholders in LMICs (e.g. ministries of health, national and local health authorities, national health policy makers, etc.) to ensure that the evidence generated from our research are reviewed by them for uptake into policies." [NIHR Global Health Research Unit on Global Surgery, University of Birmingham]

Five awards have invited policymakers to be **members or observers of advisory groups** or have held a stakeholder meeting including policymakers:

"We have established a policy and implementation committee. It is planning pathways to integrate the Unit's research findings into clinical policies and guidelines that will change patient care worldwide. The committee had memberships of various surgical societies from the world, UK government officials, WHO, NGOs, industry etc". [NIHR Global Health Research Unit on Global Surgery, University of Birmingham]

Often meetings with health department officials are referenced, which take place either at specific events, such as centre launches, or as part of regular scheduled contacts. These might concern specific issues - such as strengthening frontline workers of primary healthcare teams - but also generally to ensure that the work is aligned to the strategic directions of Ministries of Health. In addition, interactions with national stakeholders can take the form of **sharing research data and methods with national organisations**, often through being invited as members of a committee.

Other ways of influencing policy can be through engagement with **key scientific organisations, NGOs or key industrial players**, as the following example shows:

"Punjab Public Health Agency […] provided a Letter of Support and introduced us to government sectors working on non-communicable diseases (NCD). It also launched the first "Policy Roundtable Series" for NCD in Punjab with attendance from the Unit's local and international leads along with other local stakeholders" [NIHR Global Health Research Unit on Diabetes and Cardiovascular Disease in South Asians, Imperial College London]

"In Cape Town in July 2019, our Unit will hold a workshop 'To Develop a Road Map for an African Vaccine Policy'. The local production of medical health technologies is receiving more attention on the African continent. However, the focus has been on chemical drug entities and biologicals: vaccines have been neglected. The African Vaccine Manufacturers' Initiative (AVMI) is comprised of current manufactures on the continent (South Africa, Senegal, Tunisia) as well as aspiring producers (Ghana, Kenya, Nigeria, Ethiopia) and was set up to promote local vaccine development and manufacture in Africa. The workshop will bring together industry, policy makers, academia and global health agents (local and international)" [NIHR Global Health Research Unit on Tackling Infections to Benefit Africa, The University of Edinburgh]

Sometimes policy influence might be a question of using **windows of opportunity** or reacting to **changing spheres of influence**, as one Unit has found, regarding Sierra Leone:

"With the new government, there is currently a clear window of opportunity for our Unit to make a sustainable positive impact on the non-communicable diseases (NCD) and mental health agenda. These two conditions have been largely overlooked over the years. However, currently there are indications of a change in this narrative. The NCD policy and strategic plan is currently being reviewed, and […] our research findings are being fed into the process" [NIHR Global Health Research Unit on Health in Situations of Fragility at Queen Margaret University, Edinburgh]

*International level*

At the international level, policy engagement with the **World Health Organisation** was a focus for the research teams of seven Units.

"The WHO Bulletin used our 'Perspectives' submission regarding the goals of this Unit and its early findings as an editorial in its June edition: 'Health Systems in Fragile Settings'. This was based around an invited presentation to the first Global Ministerial Summit on Mental Health in London in October 2019: 'Strengthening the 'system for mental health' in Sierra Leone through complex systems analysis' " [NIHR Global Health Research Unit on Health in Situations of Fragility at Queen Margaret University, Edinburgh]

"We published the Global Asthma Report 2018 […] which focuses on LMICs and includes 22 recommendations: five to WHO, nine to governments, four to health authorities and four to health professionals, societies and patient organisations". [NIHR Global Health Research Unit on Lung Health and Tuberculosis in Africa at Liverpool School of Tropical Medicine]

## 3.4 Training of research and research-support staff

All Units discussed training and capacity in their Annual Reports and offered training and workshops on research skills to help build research capacity. 12 Units are funding formal

trainee posts, meeting the NIHR Academy definition of an NIHR Academy Trainee[1] , with the remaining Unit providing a programme of capacity-building through other approaches.

A breakdown of the type of higher degrees undertaken by NIHR Academy Trainees from LMIC Units is shown in figure 5, from which it is apparent that PhDs are the most prevalent type of higher degrees being undertaken.

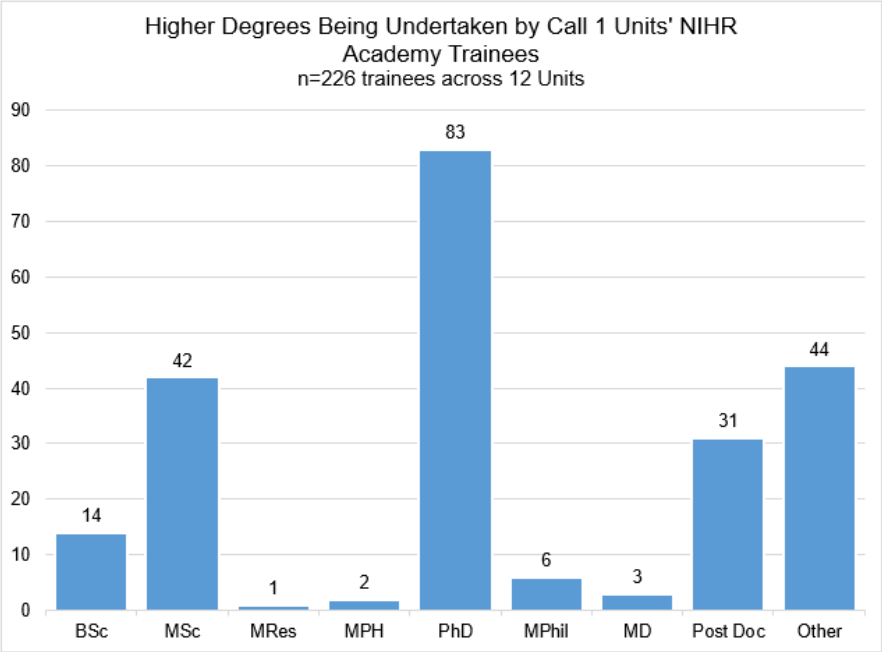


*Figure 5: Type of Higher Degrees undertaken by NIHR Academy Trainees (one Unit does not have trainees meeting the Academy definition with >25% NIHR funding)*

The vast majority of Academy Trainees are from India, followed by Pakistan. This reflects where the highest concentration of Units partnerships is found. (Figure 6)

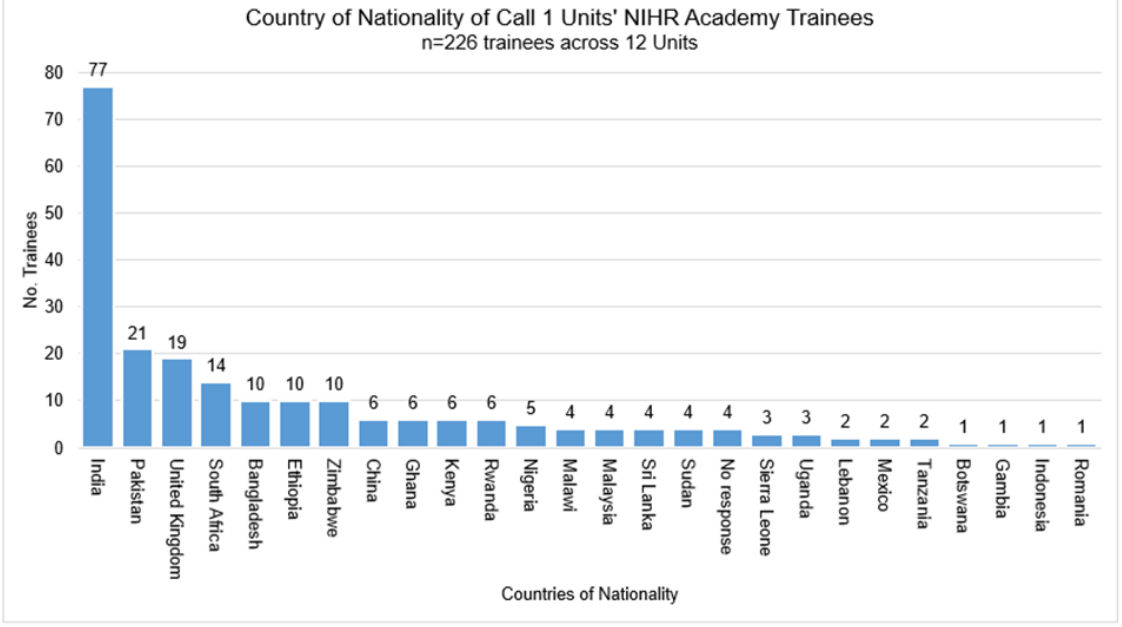


*Figure 6: Nationality of NIHR Academy Trainees (one Unit does not have trainees meeting the Academy definition.*

[1] 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.

*Building research skills with partners*

Workshops were run to help 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. They included workshops on data collection and analysis, financial management, and DNA extraction. Many of the Units offered these learning opportunities both online through webinars and calls with mentors, and in-person through workshops, seminars, and colloquia. For example, one offered a leadership development course for early career researchers.

*Supporting early career researchers to pursue advanced degrees*

Eleven projects **provided support for staff and students to pursue Masters, PhDs, or post-doctoral fellowships**, including learning how to conduct research, attending conferences, learning through mentorship, submitting papers to academic journals, and more. Helping individuals pursue post-graduate education in their chosen field of study builds capacity for the entire unit and the wider research ecosystem.

Three 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.

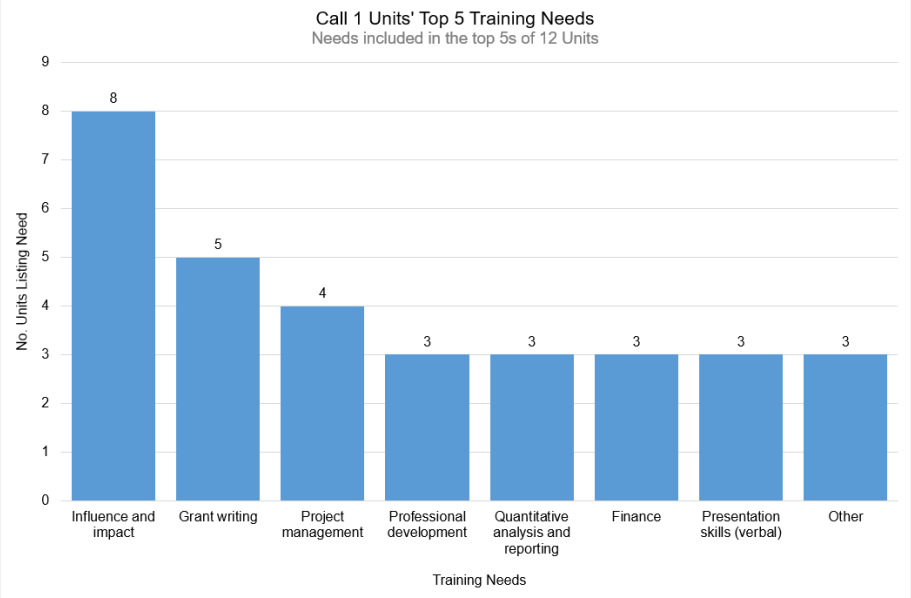


*Figure 7: Top training needs reported across the 12 Units with NIHR Academy Trainees.* (Collated from detailed training and capacity data collection spreadsheets and narrative sections reported annually by Units).

## 3.5 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 are 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.

Five Units had active FAF awards during the reporting period, with two Units being successful in two funding rounds. This funding was allocated to LMIC partners based in Mexico, Colombia, Ghana, Nigeria, Rwanda, South Africa, Pakistan, India, Bangladesh, China and the Philippines. FAF funding was used to provide financial management training; purchase specialist software; strengthen financial systems, governance, policies and procedures; engage financial professionals to provide advice, develop skills and implement financial management systems; conduct assessments and audits; and achieve Good Financial Grants Practice (GFGP) accreditation. Some Units used the funding to hire finance managers in their partner countries, as these resources had not been included in the original Unit funding application.

While FAF enabled Units to address these gaps, NIHR has since strengthened their application guidance for new research calls to highlight the need for resourcing partner organisations appropriately, including for research support functions such as finance.

*Other institutional capacity strengthening*

Four Units helped to build institutional capacity through the **development or purchase of technology.** They procured new lab equipment and/or IT infrastructure for their researchers to use and access which are required to remain available for ODA eligible research and to be maintained by the institutes beyond the award end to support future research sustainability.

**Healthcare infrastructure developments** funded independently, yet inspired as a consequence of the NIHR award, have been documented, such as preventative cardiology and mobile services for rural communities (see example below) or an outreach mobile clinic team in Vellore. A research team focusing on diabetes and cardiovascular disease reported that:

> "we have established the first Preventive Cardiology Department for Punjab state (Pakistan) at the Punjab Institute of Cardiology, which will review all people with myocardial infarction (MI) 6 weeks post discharge to optimize their medical therapy and to ensure that they receive appropriate post MI lifestyle counselling" [NIHR Global Health Research Unit on Diabetes and Cardiovascular Disease in South Asians, Imperial College London].

## 3.6 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:

*"Equitable partnership within the Unit's work is demonstrated by the composition of our governance structure and by how we spend our funds. Our Directorate consists of one female and two males (demonstrating our commitment to SDG 5), with one of them being the Principal Investigator for South Africa. Our Steering Committee is composed of equal numbers of five African and five Edinburgh partners."* [NIHR Global Health Research Unit on Tackling Infections to Benefit Africa, The University of Edinburgh]

Projects referenced a range of other mechanisms and learning for building equitable partnerships. This included:

- Facilitating regular meetings with international partners 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 between these meetings. However, it was recognised that such conference calls could be problematic due to internet issues in some of the LMICs. In these instances, WhatsApp was often used to keep everyone up-to-date.
- Working with LMIC partners to select and prioritise the research questions. They explained how this ensures local ownership and buy-in for the research from both their academic colleagues and key stakeholders, such as Ministries of Health.

"Local ownership has been promoted from the pre-application stage. While a collective approach has been agreed upon regarding overall objectives, with the research approach, and, more recently a common evaluation framework grounded in implementation science theory and models, each partner team leads its own research work package, identifying the priority care platform in which the health system strengthening strategies were to be identified, developed and evaluated. With collaborative input from King's College London academics they finalise the research plan, and are responsible for its delivery, and for leading preparation and dissemination of work package-specific outputs." [NIHR Global Health Research Unit on Health System Strengthening in Sub-Saharan Africa, King's College London]

- Conducting peer-to-peer learning sessions which focused on and prioritised bi-directional learning.
- Exploring the equitable distribution of any Intellectual Property (IP) ownership among all partners.
- Including members of the LMIC teams in all the interview panels.

## 3.7 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 3: 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.<br>*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.<br>*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 4 E approach

The NIHR Global Health Research Units 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 spent.

Units demonstrated that they comply with NIHR Unit 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.

Unit 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.

Details of equity in terms of the equitable distribution of the intervention to the target population are detailed in section 2.3.

## 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 Units reported applying for additional funding, which was often successful. From the information provided in this round of reporting, around 30 external funders were identified that have awarded funds to NIHR Global Heath Research Units. Where specific amounts were reported, these amounted - across all Units - to around £35.5 million, with an additional $4.7 million awarded in dollars. 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) |
|---|---|---|
| Global Challenges Research Fund | 8 | ~£15,000,000 |
| NIHR Doctoral Fellowships | 6 | ~£395,000 |
| NIHR clinician award | 1 | ~ £1,400,000 |
| NIHR Financial Assurance Fund | 3 | ~£150,000 |
| NIHR (HTA programme) | 1 | ~£2m |
| Wellcome Trust | 4 | ~£10,000,000 |
| DFID/FCDO - Coalition for Operational Research on NTDs | 1 | ~£153,000 ($195,000) |
| MRC | 4 | ~£3,800,000 |
| NIHR partnership award (DFID/MRC/NIHR/Wellcome) | 1 | ~£150,000 |
| Bill and Melinda Gates Foundation | 3 | ~£2,360,000 (~$3,000,000), plus 1 grant of £6M awarded in 2018 and reported in 2019 |
| Horizon 2020 | 1 | ~£4,000,000 |
| WHO | 1 | ~£860,000 |

# 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 Unit awards, together with the most common specific subcategory for the risk entry and three examples of types of mitigating action per subcategory. Since Units may enter risk types an unlimited number of times, the number of Units citing the risk is also given, to give an indication of spread across Units.

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

| Risk | Description of the risk (number identified) reporting on the risk | Most common subcategory (number identified) reporting on the risk | Examples of how the risk being managed/ mitigated? |
|---|---|---|---|
| 1 | *Political / socioeconomic / cultural / technological / environmental issues in LMIC* (57 entries from 11 Units) | Political (36 entries from 10 Units) | • Awareness of local situation using local knowledge<br>• Maintain conducive working relationships<br>• Carry out risk assessments to focus efforts where staff are not endangered. |
| 2 | *Insufficient skilled LMIC staff / limited resources / poor infrastructure / language barriers /operational delays / cross country organisation* (37 entries from 11 Units) | Resource (10 entries from 7 Units) | • Book meetings in advance where time is a limited resource<br>• Regular reporting based on agreed milestones<br>• Combine meetings and training, providing videoconferencing to support attendance |
| 3 | *Recruitment / retention issues* (33 entries from 13 Units) | Retention – staff (17 entries from 13 Units) | • Offer continued training opportunities<br>• Agreed handover and notice periods<br>• Rigorous recruitment selection process |
| 4 | *Finances inadequate / inflation / currency exchange and transfer issues* (22 entries from 12 Units) | Currency transfer (9 entries from 9 Units) | • Financial reporting and monitoring<br>• Set up appropriate financial channels<br>• Utilise self-funding or separate contracts |
| 5 | *Data breaches / data security / data quality / data issues* (20 entries from 9 Units) | Data quality (10 entries from 7 Units) | • Staff training<br>• Monitoring of data collection<br>• Evidenced based data collection and analysis by experienced staff |

## 5.2 Challenges

Six Units reported political challenges in specific countries (India and Pakistan, Sri Lanka, Sudan, Zimbabwe and Ethiopia) and in one case challenges were also related to

**environmental issues** (floods in Bangladesh, India and Sri Lanka; extreme heat in India and Pakistan). As would be expected in such situations, Units are taking steps to mitigate for these factors as far as possible. Practical issues were also cited, such as challenges of getting UK entry visas for students and collaborators, difficulties obtaining laboratory items in Africa, and time required to carry out due diligence checks in remote and sometimes inaccessible areas.

### 5.3 Fraud, corruption and bribery

Units 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 Units. NIHR will continue to strengthen its guidance and support to active Units 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 Safeguarding at the Units and Groups cohort meeting in May 2019 and have used the DFID/FCDO enhanced due diligence for external partners to support the cohort and alert teams to the increased scrutiny in relation to safeguarding. The Call 1 Units do not have explicit safeguarding provisions in their NIHR contracts but the expectation of NIHR in relation to safeguarding researchers and participants has been drawn to their attention, as has the necessity of implementing appropriate policies and procedures to support effective safeguarding.

The future annual reporting templates will be revised ahead of the forthcoming reporting round to include specific questions on safeguarding and encourage reporting on safeguarding issues (although not a contractual requirement within the Units' current contracts). Safeguarding approaches however are being considered as part of the development of the NIHR wide assurance processes and are being aligned with other UK funders to ensure a consistent approach is adopted. This will include developing robust guidance and sharing learning across managing agents and other UK funders. Teams are advised by NETSCC to ensure that safeguarding aspects are covered in the project risk registers as part of the standard monitoring processes.

Three Units reported information related to **safeguarding** policies in their Annual Reports, although this was not a specific item requested by the Annual Report template at the time. These teams had updated their risk registers having experienced safety events such as road traffic incidents on field trips, contextual instability and personal attacks in the locality although not directly affecting the team, research or participants, and increased considerations around the safety guidance for field workers. No safeguarding issues were raised against the awards or required investigation in the period.

# 6. Delivery, commercial and financial performance

## 6.1 Performance of awards on delivery, commercial and financial issues

Units 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. All Call 1 Unit awards have experienced some form of delay although all have indicated that they would like to make a request for no-cost extensions.

The majority of the reported underspends are related to initial start-up delays. The other delays 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 decreased by 27% between the year 1 and year 2 spend profiles. Based on current spend profiles, financial modelling predicts this will reach a 5% underspend by end of year 3. Units are therefore broadly on track to achieve their budget spend, assuming no unexpected delays[2]. One example of how Units have endeavoured to repurpose accumulated underspend was by supporting networking and knowledge/best practice sharing within themes.

In this reporting period, five Units were successful in obtaining additional funding for **FAF (Financial Assurance Fund - see section 3.5 for further details).** All were awarded ~£50k and the additional FAF funds were 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 re-profiling of year 2 spend was undertaken and projects were supported to be realistic in the spend forecast, to ensure spend profiles are as accurate as possible. In the period under consideration, all Units were confident that underspend will continue to be reduced 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 have been met?* )

2 The current report precedes the COVID-19 pandemic which is highly likely to impact on project spend across the portfolio.

DHSC reports relevant transparency data relating to the NIHR Global Health Research Unit 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 Units do not have a contractual obligation to meet the IATI standard by reporting data relating to ODA funding to the IATI registry. This requirement has only been introduced in later NIHR ODA research contracts. However, NIHR engaged the Units 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 Unit Directors, Research and Finance Managers is maintained via the Slack platform and email. NETSCC staff attend meetings such as conferences, workshops and stakeholder engagement events either in person or remotely, balancing environmental considerations.

The NETSCC document project issues on 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.

Unit 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*

Units 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 Units 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 Unit 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 Units 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.
- Units 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 Units.
- 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 (by the 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 Please summarise any 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 Units 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 wellbeing 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 Please summarise any activities that have taken place to minimise carbon emissions and impact on the environment across this funding call.**

NIHR provide guidance to Units 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.