Community Responsive and Effective Urban Health Systems (CHORUS)

Inception Report

February 2021

Contents

1 Introduction

CHORUS (Community-led Responsive and Effective Urban Health Systems) is a partnership of seven organisations in five countries: ARK Foundation Bangladesh; HERD International, Nepal; BRAC James P Grant School of Public Health, Bangladesh; University of Ghana; University of Nigeria; University of Leeds and University of York. CHORUS began functioning on the 1st May 2020. A plain English summary of the programme is attached as Annex 1.

The overarching aim of CHORUS is to enhance the capability of countries to generate and use evidence leading to policies that improve the health and wellbeing of poor urban residents and slum dwellers. CHORUS combines a strong focus on capacity strengthening to undertake policy relevant urban health research together with stakeholder -led implementation and cost effectiveness research. We will conduct two large projects focused on the poor in two cities in each country. In addition, up to eight smaller projects will be undertaken focused on cross-country work. A summary workplan is provided in Annex 2.

During the inception year our work has focused on:

- Establishing inclusive internal management and administrative structures, with clear roles for RDs, CEOs, PIs, methods and gender equity mentors, RU managers and the capacity strengthening team
- Undertaking basic intelligence work on the range of stakeholders, structures and needs of CHORUS cities to inform our policy-focused research approach
- Developing tools for monitoring the progress of the consortium, planning and risk management
- Developing and initiating our approach to capacity assessment and strengthening
- Developing and initiating our approach to gender and equity led by the gender mentor in ARK, Bangladesh.
- Developing the first large project in each country to point of submission for ethical approval
- Agreeing contracts with CHORUS partners which ensure clarity on remuneration, termination and VfM
- Establishing an interdisciplinary CAG and listening to their advice on our approach and projects.

In addition, partners have analysed the impact of covid-19 on urban areas in the cities in which they are working through a review of policies, media and other documentation. Teams across CHORUS are now working on cross-partner publications and policy outputs on themes that have emerged across CHORUS countries including the role of the private sector and coordination within urban areas. These papers are led by LMIC researchers. We plan immediate policy dialogues on the findings in each CHORUS city.

Due to the pandemic, all interactions between partner teams were conducted remotely. We were asked to reduce our inception year budget by 20% as a result of the overall reduction in the FCDO budget. Both these challenges necessitated some changes in working as follows:

- Capacity strengthening activities were limited to developing a strategy and initiating priority activities such as Action Learning Groups. Although some assessment of the team has been undertaken the remaining assessment was delayed until year 2.
- Project development was somewhat delayed: project designs have been completed but full ethics approval for the first projects have been delayed to Qtr 1 year 2 rather than Qtr 4 year 1.
- While some consultations with policy makers and some providers were possible most interactions with communities have been delayed until phase 1 of each project. This means that design of each project is more flexible than was envisaged. We are dealing with this through a two-stage ethical approval process, with approval for the first two stages at the beginning of the project and then a later application once the precise focus of the intervention and design of the evaluation is completed.
- We were unable to hold an in-person CAG meeting. We held two remote meetings. The first, for partners to meet the external CAG members and present projects and the second a full but shorter CAG meeting (March 2021). External CAG members have provided comments on the overall CHORUS approach and Project 1 proposals of partners (Annex 5).
- All inception events were conducted remotely and slightly later than intended.

In developing these plans, we have endeavoured to respond to peer reviewer comments on our proposal. The responses to these comments are detailed in Annex 3. The inception report covers all areas required in the FCDO inception year log frame as summarised in Annex 4. The revised budget (financial proforma) now with years based on the UK Government financial year is attached as Annex 12.

2 Research framework and approach

Based on a recent conceptualisation of the urban health system by CHORUS team members (Elsey et al, 2019), our approach aims to emphasise two elements. Firstly, that communities are best able to identify their health and health system needs and so CHORUS places urban residents at the centre throughout the research process. Secondly, that urban health systems are complex, respond to a double burden of disease (communicable, non-communicable) and involve multiple actors, sectors and provider organisations. Health system solutions must reflect and respond to this complexity. This is reflected in the four pillars that underpin and provide coherence across our programme (Figure 1), as follows:

- Pillar 1: Reflecting the plurality of private, NGO and government providers in urban areas
- Pillar 2: Building collaboration across sectors to address the social determinants of health
- Pillar 3: Strengthening systems to prevent and respond to the double burden of non-communicable and communicable diseases
- Pillar 4: Identifying, reaching and engaging the urban poor

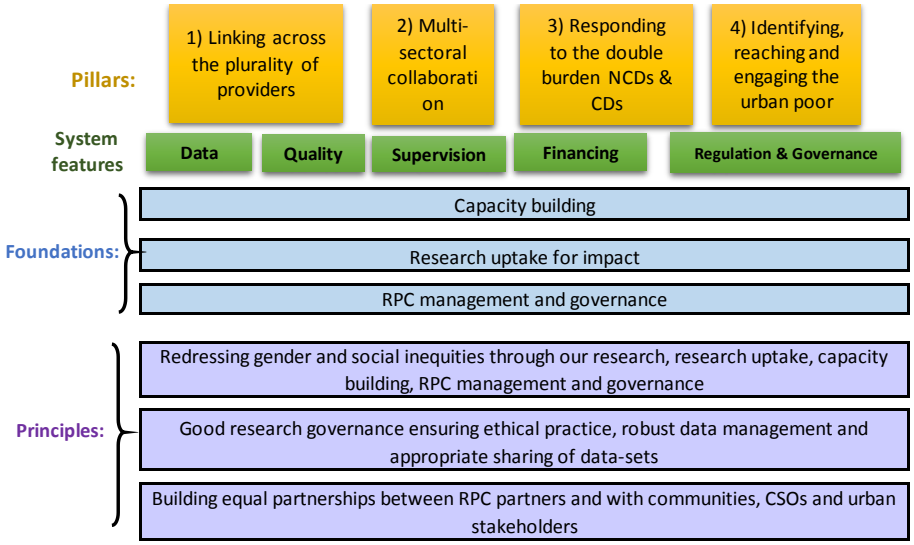


Figure 1: CHORUS pillars, foundations, and principles

2.1 Project progress during the inception stage

During the proposal stage we developed a series of research questions related to each pillar. These are being modified and focused through the development of the eight large research projects to be undertaken during the lifetime of CHORUS. The first four projects (1 per country) have been elaborated during the inception year (Table 1).

Table 1: Research focus, questions and pillars addressed in Project 1

Lead partner	Topic	Pillar and central research questions	City
ARK	Introducing the PEN package into the urban primary care system	Pillar 1 (plurality of providers) and Pillar 3 (double burden of disease) RQ: How can we strengthen the urban health system at the primary care level to provide NCD care and make it accessible for all?	Dhaka and later Khulna
HERDi	Building links between public and private primary care providers to respond to NCDs	Pillar 1 (plurality of providers) and Pillar 3 (double burden NCD/CD): RQ: How can the linkages between public and private healthcare providers, and practice of community engagement in decision making be strengthened to improve healthcare access for NCDs for urban poor?	Pokhara municipality
University of Ghana	Strengthening the CHPS programme in urban areas	Pillar 2 (collaboration) and 4 (identifying/reaching the urban poor) Strengthening the CHPS programme through motivated volunteers and CHOs to provide and support life- cycle health	La Nkwantang Madina and Ashaiman municipalities

Lead partner	Topic	Pillar and central research questions	City
		promotion and prevention policies, programs and services at the household and community level	
University of Nigeria	Linking public and informal sectors to improve urban health	Pillar 1 (plurality of providers) and 4 (identifying/reaching the urban poor) RQ: How can the links between informal health service providers and formal health system (MoH, formal public and private providers) be strengthened to ensure delivery of essential and quality health services in urban slums and for the urban poor?	Onitsha & Enugu

Key: PEN = Package of Essential Non-Communicable Disease Interventions; CHPS = Community Health Planning and Services Programme.

These projects are based on consultations with stakeholders (Table 2) on the needs of the poor in the identified cities together with analysis of the demand from policymakers and their willingness to engage and integrate interventions into city plans. Partners used the CHORUS project planning template to help them scope out their project (available on request). This was later reviewed by CHORUS team members not involved in that project and presented at a series of CHORUS workshops.

CHORUS-wide project meetings have enabled us to identify the synergies between the projects. As part of our strategy for ensuring value for money, stage 2 of our research process (see fig. 2) focuses on making full use of existing literature and data to support our projects and engagement with policy makers. The reviews and secondary data analysis are enabling partners to work together to answer common questions under the CHORUS pillars. For example, the systematic reviews action-learning group (ALG), led by ZQ (BRAC University), are developing the protocol for a scoping review of public/private/informal provide coordination models which will inform the co-design process for the ARK, HERDi and UoN projects working under pillar 1 (plurality of providers). The quantitative ALG are identifying data sets to understand the epidemiology of both CD and NCD in urban areas, particularly the vulnerability of urban residents at the intersection of gender, disability, poverty and other relevant vulnerabilities.

Projects were then presented to external CAG members who offered initial comments on each (Annex 5), as well as the potential synergies and/or gaps that could form the focus of project 2s. Proposals will also be subject to more detailed peer review by CAG members once they are finalised.

Table 2: Project 1 stakeholder consultations undertaken during the initial development of each project

Partner	Government	NGOs	Community
ARK	Representatives of Dhaka North City Corporation (DNCC), MOLGRD; DG Medical Education, MOHFW; Representatives of NCDC programme, Health Economics Unit, MOHFW.	Representatives of 7 NGOs working with DNCC in providing primary health care.	Community Panel representatives including patients having NCD and CD, caregivers, and representatives of community (school teachers, Islamic leader, community health worker)
HERDi	Federal Ministry of Health and Population, Policy Planning and Monitoring Division; Department of Health Service and Health Coordination Division; WHO, Nepal health Sector Support Programme/UKAid; provincial and municipal health officials. All consultations focused on urban health system and role of municipalities in federal context.	Discussion held with NGOs working with different groups i.e. Karuna Foundation (people with disability); Lumanti (slum dwellers), Human Rights related to migrants, health Research and Social Forum (TB care)	Slum community, community health volunteers, social workers and community health care providers.
University of Ghana	Greater Accra Regional Minister (Endorsed the selected study sites) Regional Coordinating Director (Local government head at regional level and a member of CHORUS Ghana team)	NGOs and community groups to be included during intervention phase	Religious groups, Traditional Authority, Community Health Volunteers, Community Health Officers, Assembly Members

Partner	Government	NGOs	Community
	Ghana Health Service (GHS) Greater Accra Regional Health Director-Also a member of the CHORUS Ghana team who assigned municipal directors of health for the two communities to be part of PROJECT 1 Ashaiman Municipal Health Directorate, La Nkwantanang Madina Municipal Health Directorate, Greater Accra Regional Coordinating Council, Ashaiman Municipal Assembly, La Nkwantanang Madina Municipal Assembly		Community members were engaged during the problem identification and determination of research questions. Rich pictures and causal loop diagrams were developed through first community engagement. Community members will be further engaged during the intervention and data collection phase of the project
University of Nigeria	Consultation with public sector providers and state Department of Health	Initial consultation with informal provider groups. This will be expanded during phase 1.	Community engagement to be held between Feb and March 2021.

2.2 Planned approach for implementation of each project

Our approach has five stages (figure 2): 1) seek to understand the needs and viewpoints of communities; 2) problem identification supported by the analysis of existing data on the urban environment in each country context and synthesised evidence of approaches to similar issues in other comparable contexts.

Information gathered during stages 1 and 2 will be used to 3) co-create and implement health system interventions with community, provider and policy stakeholders. The interventions will then then be evaluated to study 4) the process of implementation including barriers and facilitators to scaling the intervention and 5) effectiveness, cost-effectiveness and overall impact. Throughout the stages of the research, sustainability and potential for scale-up will be considered. Key to this process is the practice of embedding research within policy and practice at all levels of the system, from community structures to local government or private providers and national ministries (Whyle et al, 2020). We will draw on resources such as WHO's Nine Steps to Scale Up[1] to guide and document our approach and impact. The impact pathways developed for each project (impact pathways template available on request) will be used and adapted throughout the project lifespan and will inform our overall theory of change (see Annex 6).

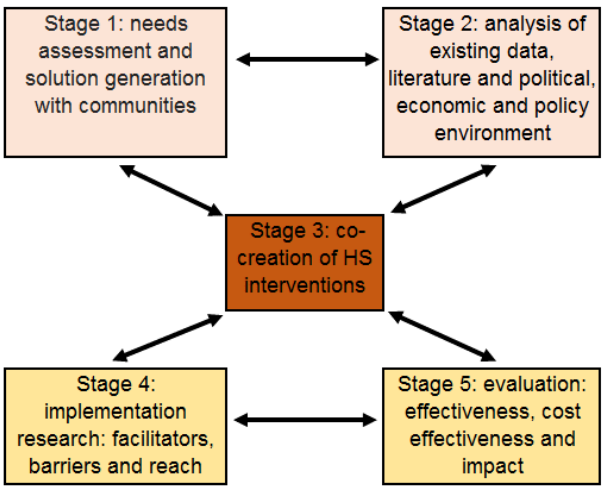


Figure 2: CHORUS Project stages

A range of research methods will be used at each stage of the research. In the initial stages (stage 1 and 2) we will make extensive use of qualitative and participatory methods to understand the views and needs of stakeholders as individuals and groups or organisations. These enquiries will be backed up by:

- Analysis of available secondary data sets, used to provide information on the scale of identified problems and the populations affected
- Systematic and scoping reviews used to review the evidence on approaches to similar issues in the country and in other comparable contexts.

During the co-creation of interventions (stage 3) we will use participatory and visual techniques to co-design interventions with communities, providers, local governments and other key stakeholders. This stage of

[1] ExpandNet and WHO. Nine steps for developing a scaling up strategy [Internet]. 2010. World Health Organization. Available from: https://www.who.int/immunization/hpv/deliver/nine_steps_for_developing_a_scalingup_strategy_who_2010.pdf

research will work hard to ensure that interventions meet the needs of urban communities whilst recognising the capacities of providers and constraints on policymakers.

A process evaluation (Stage 4) will employ a range of methods to understand the factors facilitating and inhibiting intervention implementation and investigating mechanisms of impact. Methods are likely to include document review, observation, qualitative interviews with patients, health workers and other stakeholders and analysis of routine data to identify uptake and reach.

Analysis of effectiveness and cost-effectiveness (stage 5) will use the most robust methods that are possible given the nature of the intervention, constraints imposed by policy makers and data availability. Cluster randomised control trials (cRCT) are likely to be used in some projects where there is the ability and policy willingness to select clusters randomly and there is a clear outcome to be measured. Where randomisation is not possible or where outcomes are not as easily defined/tracked, we will use other methods such as quasi experimental methods to assess impact. More detail on the specific range of methods that will be used in the first four projects in each country are described in table 3.

Table 3: Range of methods to be used for Project one in each country

Stage	Bangladesh: NCD in primary care	Ghana: CHPS to reach urban poor	Nepal: PPP for NCDs	Nigeria: Informal sector integration
Stage 1: Needs assessment	KI, IDIs and FGDs with participatory methods with communities, providers and policy makers. Facility assessment survey with routine data collection	Facility assessment survey; household survey of access; community engagement to identify poor groups; IDIs with CHPS staff and participatory workshops with communities and local government	KII with municipal health officials and private healthcare providers; health facility service readiness tool; KII with public providers; observation; assessment of routine data collection	IDI, FGD, Town hall meetings and use of nominal group technique with key stakeholders.
Stage 2: Evidence review & policy mapping	Scoping review on NCD control in urban areas Systematic/rapid review of public private partnerships	Review of literature on delivery of PHC in Ghana; Secondary data analysis of DHS, Greater Accra STEPS, Systematic review of effectiveness of CHPS	Review of plans and budgets, Systematic/rapid review of public private partnerships/NCD Secondary analysis of STEPS.	Rapid review of engagement strategies Secondary data analysis of STEPS. Systematic/rapid review of public private partnerships
Stage 3: Intervention co-creation	Key informant and in-depth interviews; pre-test training materials	Local governments, CHPS providers and community interviews and workshops to agree and develop interventions	Intervention to include a) strengthened capacity of Health workers to deliver based NCD services b) private sector links c) improve access by poorest	Workshops and creativity groups; desk review of protocols; expert review
Stage 4 & 5: Implementation research and evaluation	cRCT and Process evaluation	Quasi experimental impact (knowledge and service use) evaluation with control matching	Quasi-experimental design with intervention/comparator wards. Process evaluation and economic evaluation.	cRCT and ITS; process evaluation

Key: KI= Key Informant interviews; FGD = Focus Group Discussions; IDI= In-depth Interviews; cRCT = Cluster Randomised Control Trial; ITS = Interrupted Time Series

2.3 Central Innovation Fund

In addition to the eight large projects, CHORUS will also support smaller projects that will be distributed through a restricted competition open to the CHORUS team and associate academic and civil society partners. The aim of this fund is to encourage innovative research in individual or across multiple CHORUS countries. It will be made available in years 1 to 4 of the programme with proposals of up to £50,000 and is an important part of our capacity

strengthening strategy. Criteria (provided on request), in addition to overall quality of the proposal, will include leadership by an early career LMIC researcher and potential to extend knowledge in relation to the 4 CHORUS pillars and system features. CHORUS PIs and CAG members will assess applications against the criteria, to ensure transparent allocation of funds to the projects most likely to build capacity whilst also answering questions of key importance to communities and stakeholders in CHORUS countries.

2.4 Ensuring quality products

High quality research outputs are essential to the credibility of the CHORUS programme. At all stages, research produced by individual CHORUS projects will be assessed by CHORUS PIs, methods mentors, RDs, CEO and CAG members against criteria that assess: a) their adherence to CHORUS principles, foundations and pillars; and b) research quality and ethical standards.

Ensuring quality during project outline development (complete for large Project 1)

1. A CHORUS project planning template (available on request) has been developed with sections describing the stages of the research, methods to be used, budget and work-plan.
2. Partner peer reviewer appointed to comment on the project through development and implementation
3. A brief description of each project presented to the entire project team. With first comments from the internal peer reviewers.

Ensuring quality during project development (Complete up to stage 6 for large Project 1)

4. Projects have been developed by partner team and the project planning template completed. Concept is discussed in a regular basis (3-4 meetings) with a core CHORUS group including one of the co-research directors, CEO, partner peer reviewer and methodologists (qualitative, quantitative).
5. The project is presented in detail to the entire CHORUS team. The planning template is circulated in advance. The internal partner reviewer provides verbal and written comments.

Project workshops for the first large projects were held November and December 2020. This was followed by comments from internal partner and health system peer reviewers and discussion (using breakout groups on zoom) of gender, health systems, qualitative and quantitative issues associated with the project. Comments were written up and circulated to the presenting CHORUS partner team.

6. The project planning template is reviewed by co research directors, relevant team methodologists, partner peer reviewer and an external peer reviewer from the CAG. The project is revised accordingly.
7. The planning template is used as a basis for: i) developing a detailed protocol and research tools for ethics submission in partner country and UK; ii) developing an M&E plan for monitoring project activities and outputs.

Ensuring quality during project implementation

8. Regular monitoring of project over its duration. Peer review at mid and endpoint. Relevant methodological reporting guidelines used in the write up for peer-reviewed publication (publication plan available on request).

External members of the CHORUS CAG have reviewed the overall programme and also emerging projects of partners. Their comments are attached as Annex 5.

2.5 Addressing the challenges of Covid-19

Covid-19 has affected all four CHORUS countries, particularly the poor in urban areas. Early in the inception period, the CHORUS Executive Committee took the decision to spend some time examining the policies that had been put in place in each country and their anticipated effect on urban populations. A protocol for this work was developed (available on request). The work has been undertaken through a desk review of official documents, journal articles and media reports that were published relating to the response to the disease including both public health and economic measures. The review drew on databases of published articles, grey literature produced by government and media reports published by the main news agencies. Each country is producing a standalone report and the team will also produce cross-CHORUS thematic publications aimed at a policy and academic audience and contribute to policy dialogues at country and city level. Teams will then look at the outstanding questions of the impact of Covid and Covid policies on the poor with a view to developing self-contained proposals for further work that could be funded out of the CHORUS responsive innovation fund.

Findings from this work are still being produced but several themes are emerging across CHORUS cities. This includes the extent to which the public sector engaged with private providers to deliver Covid related services and

the knock-on effect on the provision of other health services. Issues of governance and regulation including mismanagement and corruption in the procurement process are also evident. A second theme has been the extent of coordination of many disparate agencies involved in policy and provision around Covid. In Nigeria, for example, the work suggests that more than 20 agencies are involved in the urban Covid-19 response. The development of papers and policy outputs on these cross-cutting themes is being led by working groups of researchers from across CHORUS partners. These activities have helped build working relationships and coherence across the consortium.

2.6 The CHORUS contribution to poverty reduction

We expect that CHORUS research will contribute to poverty alleviation in a number of ways:

1. Interventions - the problems and co-created interventions are designed to address the health needs of poorer populations in urban areas. Ill health of these populations has a direct negative impact on the ability of the household to earn a living. Seeking health care can lead to further impoverishment because health care takes time to access and is expensive once treatment is obtained. Focusing on multi-sectoral collaboration and prevention as well as health-care responses will support urban residents, particularly the poorest to reduce their need for health care. By taking a health system approach and a population perspective on economic evaluations we endeavour to examine the financial impacts of ill-health and interventions on households.
2. Our programme seeks to raise the profile of the health of poor urban populations at national and international level. By demonstrating the health system challenges in these areas we aim to increase awareness of their policy importance and of effective approaches to tackling these challenges by sharing evidence of effective health systems approaches in other similar contexts as well as developing and testing health systems interventions within the CHORUS projects.
3. We aim to make it easier to develop cost-effective solutions to the needs of the urban poor by strengthening capacity of each country to undertake their own policy-relevant research. This includes tools to assess the impact of programmes on poor populations such as benefits incidence, concentration and Kakwani indices.

3 Communications and Research Uptake Strategy

3.1 Research Uptake

Our Research Uptake (RU) strategy (elaborated in Annex 7) acknowledges that research is only one of several types of "evidence" that inform decision making processes at distinct levels of the system. Effective research uptake requires an appreciation and use of research co-production approaches that involve academic researchers as well as non-academic key stakeholders such as health system policy and programme decision makers and implementers, local government and communities, civil society organizations and communication experts such as media practitioners. By co-production we refer to research agenda setting, design and implementation by multiple academic and non-academic stakeholders that recognises, respects and draws on a multiplicity of evidence. Co-production is part of an embedded approach which prioritises meaningful engagement with stakeholders at every stage of the research process to ensure ownership. We will draw on the learning from the COMDIS RPC and other programmes and experiences which illustrate the impact of an 'embedded approach' in encouraging uptake of evidence based solutions, providing value for money and sustainability of research efforts.

Our strategy also acknowledges that decision making occurs during agenda setting (deciding what problem and intervention priorities occupy the mind of decision makers); policy and programme formulation (deciding on the approaches to use to address problems); and implementation (the execution or carrying out of actions to address problems). We also acknowledge that RU is not an exact science and there are many obstacles to effective research uptake into the policy process from agenda setting through to implementation. Our focus is to increase the probability of relevant and effective influence. We also recognize that much of the work for uptake and scale-up of research findings takes place at country level. All our CHORUS partners have extensive experiences of working with decision-makers in their settings to ensure evidence influences policy and practice.

Drawing upon the categorisation of strategies for shaping policy agendas and influencing policy development and change suggested by Weible et al (2012) and our collective experience with RU efforts as a consortium, leads to three core principles to structure RU thinking and planning at global, sub-regional, national and sub-national level. These are:

- DEEP KNOWLEDGE: Developing deep knowledge of the people (actors and stakeholders, context and issues in urban health to inform the micro-strategies for research uptake

- NETWORKS: Developing networks with other actors and stakeholders involved in urban health
- EXTENDED PARTICIPATION: Participation in the engagement and research uptake process over the long term (life cycle of the project at least) rather than in one of engagements

To move from underlying theoretical frameworks to concrete activities or strands of work that enable application of theory; to achieve our RU objectives requires activities at global, regional (West Africa and South East Asia), National (Bangladesh, Ghana, Nepal, Nigeria) and sub-national levels. We draw on the FCDO RU guidance notes to categorize these strands of work needed to implement a Research Uptake effort into:

- Stakeholder Engagement
- Capacity Building
- Communication
- Monitoring and Evaluation

At each level (global, sub-regional, national and sub-national) research uptake plans will be developed, supported by country RU champions, using this framework to help us organise our thinking and planning. These RU plans will support the team to move through the impact pathway developed for each project. The matrix in Annex 7 can be used by each country to help in thinking through and developing its plan. Plans include responsibilities for development, implementation, monitoring and evaluation of the plans at each level. Prolonged rather than one off engagement is emphasised. Regional RU leads, supported by the CEO, will work with countries to develop overall RU plans for dissemination of work regionally and internationally. Each partner has engaged an RU lead to oversee the work at national level.

Capacity building on RU will be conducted as an overarching consortium activity based on peer-to-peer learning across countries and sub-regions as well as moderated peer to facilitator learning in areas of identified need. RU is very much a moving target and the ability to flexibly and rapidly respond to context is critical. In the context of the overarching RU strategy the country team will have detailed plans for disseminating and influencing policy makers and practitioners and engaging with civil society beneficiaries of research that are flexible and fluid and updated on a quarterly basis. Updates give flexibility to respond to windows of opportunity, unexpected changes in the environment etc. RU plans and implementation will be closely linked to the Research Projects and to the Capacity Building and M&E strategies and plans of the CHORUS

3.2 Communications

CHORUS has developed a communications strategy (available on request) to link the strategies of each partner and support Research Uptake. The strategy has five objectives: i) Identify key target audiences at the global, sub-regional, national, subnational and local levels that will further our impact pathways for each project and overall theory of change; ii) Identify effective communication channels appropriate for each key target audience; iii) set up effective communication of research during and after the lifetime of the RPC; iv) develop a communications action plan for each project and CHORUS as whole; v) establish internal communications that support the CHORUS principles of equal partnership, inclusion, collaboration and skill sharing. Initial capacity assessment demonstrates strong expertise in communications across the consortium and we will encourage cross country learning and support in developing communication capabilities.

Communications have been integrated into the wider monitoring and evaluation strategies of CHORUS. Communications will be monitored and measured through the logframe indicators of output 1 and output 3. Communication risks are also included in the risk register and mitigation strategies (See Annex 14).

<u>Year One CHORUS Communication activities</u>

1. Establish communication leads within each partner
2. Establish a website and begin monitoring visits, disaggregated by HICs and LMIC location. We have a target of 400 visits by May 2021.
3. Establish an active CHORUS twitter account. We aim for 2 twitter posts per week.
4. One blog from each partner by the end of year 1, published on the CHORUS website.
5. Create an infographic or visual to represent CHORUS for the website
6. Establish an image library. We aim for 5 good quality images from each partner with appropriate usage rights uploaded to the online library.

7. Creation of an email database of CHORUS external stakeholders (in accordance with GDPR guidelines), with one newsletter sent by the end of the first year.
8. Establish CHORUS branding and have a set of templates and acknowledgement statements for use by all CHORUS members.
9. Establish an internal document sharing system, which is widely used across all teams.
10. Establish a fortnightly internal newsletter
11. Completion of the CHORUS capacity needs assessment and have a clear idea of communication capacity across the RPC. By the end of year one we will have a communications capacity development plan.
12. Complete website training for relevant team members

4 Capacity Building Framework

Strengthening of capacity and capabilities is a core part of the CHORUS approach to developing research that is used to transform health systems. Conceptually, improved capacity requires a number of different elements including skills, structures, roles, processes, and systems. Too often capacity strengthening has focused only on enhancing individual skills and expertise. We understand that a broader view is required that also examines requirements at the level of the organisation and system and undertakes a clear assessment of both capacity assets and needs. The approach needs to be dynamic since capacity priorities can change over time. A well thought out strategy can help to rebalance power relations over research agendas between country-level and global funders; strengthen links between research and policy to promote knowledge transition; and address wider systemic issues that can lead to system bottlenecks, un-used research capability and brain drain.

4.1 Capacity building strategy

Our approach, which is elaborated further in Annex 8, is led by the overall CHORUS capacity lead (Professor Tolib Mirzoev, University of Leeds) and regional capacity leads in South Asia (Professor Zahidul Quayyum) and in West Africa (Dr Justice Nonvignon). Key principles underpinning the strategy are to: ensure it is owned and driven by country partners; encourage south-south exchange and learning; conduct comprehensive capacity assessments to inform planning; address capacity at the level of individuals, organisations, and systems; and conduct assessments with regard to a feasible budget envelope in each country.

We aim to strengthen capacity of three groups of actors: local communities and community CSOs, health systems actors, and researchers. For each actor, capacity will be strengthened at individual organisational and system level. The strategy is divided into two parts: i) capacity assessment; and ii) capacity strengthening.

i) Capacity Assessments

Assessments to understand current capacity assets and outstanding needs will focus on the actors in each of the partner countries. Capacity leads have developed detailed guidance for capacity assessments covering sources of data, methods and tools for data collection (The Tool is available on request).

Given the importance of developing CHORUS team capability to begin implementing the projects in each country together with the year one budget reallocations, the assessments began by focusing on individuals within each of CHORUS partner organisations using a self-administered questionnaire. This will be followed by a focus on communities and health systems actors including local government agencies.

ii) Capacity strengthening

The capacity assessment will lead to the development of a structured plan of activities for enhancing individual, organisation and system capabilities. Capacity activities will include:

- Enhancement of individual skills and expertise, through traditional training and PhDs
- Establishing effective peer support and problem-based learning among early and mid-career researchers through methods and thematic Action Learning Groups (ALGs)
- Development of materials such as guidelines and manuals for implementation of CHORUS work
- Structured mentoring scheme within and between partners, underpinned by clear career pathways
- Embedding researchers with key stakeholders, and secondments between researchers, health systems actors and civil society organisations

During the inception year we have started some initial capacity strengthening activities to facilitate cross CHORUS communication and collaboration and underpin project development.

ALGs - Based on successful experience in a previous RPC we have started five Action Learning Groups (gender and intersectionality, monitoring and evaluation, qualitative methods, quantitative methods, systematic reviews) each with a focus on methods that will be used across CHORUS projects. These groups, which meet every 1-2 months, are designed to serve as a forum for peer-support and problem-based learning to strengthen the rigour of our research and practice and enhance capabilities across the CHORUS team in methods and approaches. Early ALG meetings have focused on developing guidelines on the functioning of CHORUS including the M&E framework, Gender and Equity guideline and guidance for quantitative and qualitative methods to be used by each project. Guidelines for the running for ALGs were developed and are available on request.

PhDs - We have begun recruiting for the PhDs that will be funded by the universities of Leeds and York. The studentships will be awarded to students from any of the four focal countries based on quality of the applicant and research that is well linked to CHORUS partner work.

Research Governance - Organisational capabilities are being enhanced through the shared understanding and joint development of processes for research governance including safeguarding in research, publication and data policy and quality assurance of research products.

4.2 Capacity building in research leadership

A CHORUS objective (logframe indicator 3.3) is to decentralise leadership functions to recognise capacity assets across the team and to build up leadership capabilities. From the start, the CEO is based in Ghana and contracted through the School of Public Health. Regional research uptake leads are being mentored by the CEO with the objective that they lead this function during the later years of CHORUS.

It is our intention also to decentralise technical leadership. Action learning groups will be led by team members from across the CHORUS consortium. Based on the capacity strengthening strategy, mentoring arrangements will be put in place to develop capabilities in core technical areas across the partnership.

5 CHORUS governance

5.1 Structure of consortium

The objectives of the CHORUS management and governance structure are threefold: i) to ensure a high standard of governance across the consortium; ii) to enable an equitable partnership that promotes participation in decisions by all consortium partners and encourages a gender balance in CHORUS leadership; iii) lay the foundations for promoting high quality and impactful research products. CHORUS is governed by four key groups (Annex 9).

1. Executive Committee

The Executive Committee (EC) is the main decision-making body for CHORUS including approval of projects after peer review and cross-consortium strategies such as the RU and communications strategy. The EC is chaired by the CEO and composed of country partner leads, research co-directors, programme manager and capacity strengthening lead. Other team members may be invited to join permanently or for specific meetings. The EC meets monthly usually on the first Tuesday (morning) for 1.5 hours and has so far met nine times.

2. Management Team

The Management Team (MT) is composed of the CEO, research directors and Programme Manager. The MT implements decisions of the EC. It focuses on operational matters such as implementing approved strategies, discussing progress with the development of projects and budget and expenditure issues. The MT meets for one hour each week.

The MT meets with FCDO (SRO and DPO) regularly (monthly, during the inception period). There is a fixed agenda focused on: governance issues, updates on projects, development of management tools such as the logframe, risk management and finance.

3. Consortium Advisory Group

CHORUS has established a Consortium Advisory Group (CAG) to advise on the strategic direction of the consortium and help oversee the quality of research products. It is envisaged that the CAG will meet twice a year either in person or online. During the inception year, the CAG met to discuss the overall programme direction and coherence and provide peer review input on the four initial projects (country Project 1). We have invited experts on urban health from international policy and research community. These are: Dr Sumit Kane, University of Melbourne, Australia; Prof. Stanley Okolo, Director General, West African Health Organisation; Prof Sameen Siddiqi, Chair Dept of Community Health Sciences, Agha Khan University, Pakistan; Dr Nathalie Roebelle, Urban Health Lead, WHO HQ;

Dr Jaideep Gupta, IDS Fellow, Institute of Development Studies, UK. There are three FCDO members the RPC SRO, Carolyn Sunners, the Deputy Programme Officer Caroline Murphy and Luisa Hanna. The CHORUS team is represented by the two research-directors, CEO, Programme Manager and 2 partner representatives (rotating membership). A budget has been set aside for the CAG meetings and also allowance for external members of the CAG to peer review research proposals.

4. CHORUS Oversight Group

An Oversight Committee (OC) was established to ensure high standards of research governance across CHORUS. The OC has three purposes: i) oversight of financial and management of RPC; ii) oversee ethical management of partnership; and iii) advise on how the programme can link to and utilize best practices in global development research from across the university. The committee meets quarterly and is chaired by the Dean of the School of Medicine at Leeds (Prof Mark Kearney). It includes representation from the Research and Innovation Service, Faculty Finance Office and School of Medicine as well as the Leeds-based Research Director and Programme Manager. During the first meetings (10th June, 15th September, 10th December 2020) of the OC, members approved the approach to ensuring partner due diligence, ensuring CHORUS compliance with FCDO contract terms and conditions and changes in the year one budget.

5.2 Safeguarding in research

CHORUS takes safeguarding of researchers and participants very seriously. The University of Leeds has developed a policy on International Development Research as an annex to the University's overall safeguarding policy document. CHORUS has developed a programme guideline to implement the policy across the consortium (available on request). This requires all team members to be familiar with the content of the policy and also to complete safeguarding awareness training through an online course developed by the University of Leeds focused on international development projects. Safeguarding focal points are being appointed in each partner organisation. If a safeguarding concern arises during the project, team members are asked to contact one of the focal points who will investigate further and, if necessary, refer to the University of Leeds safeguarding officer (University Secretary). Safeguarding concerns will also be reported to FCDO.

5.3 Outline of approach to monitoring and evaluation

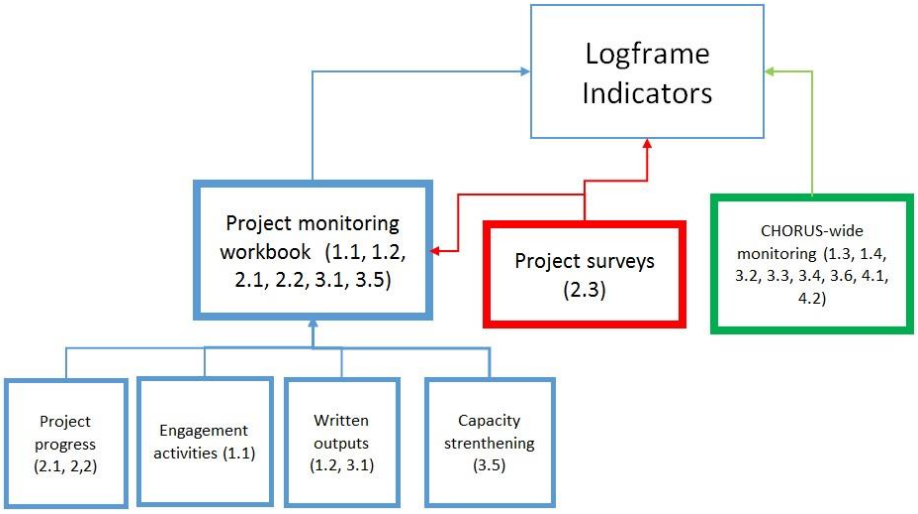


Figure 3: M&E framework and mapping to logframe

The logframe (Annex 10 and accompanying notes Annex 11) was developed through a participatory process starting during the last CHORUS inception meeting. The initial logframe was informed directly by the ToC (Annex 6) presented in the proposal but changed to reflect FCDO requirements for reporting and discussions about the focus of the programme. The logframe will be used to guide progress and for high level monitoring. It will be reviewed annually and revised when necessary in discussion with FCDO. The overall outcome for CHORUS is to:

"*Enhance capability to generate and use high quality research evidence to inform and influence multi-sectoral health system interventions, policy and programme decisions and implementation at local, national and international levels to improve the health of the urban poor*".

This outcome requires CHORUS to achieve three main outputs each with linked indicators:

1. Research co-produced and effectively disseminated to research users (4 indicators)
2. Gender-responsive pro-poor interventions designed, implemented and evaluated (3 indicators)
3. Strengthened capability to conduct high quality health system research (5 indicators)
4. Improved research governance capabilities across the consortium (2 indicators)

Our monitoring and evaluation framework is based on the generation of information to demonstrate impact of CHORUS and directly provides data required by the logframe (Figure 3).

The framework has four main sections: i) monitoring of partner projects using a standard reporting tool that monitors progress with activities and milestones and documents engagement activities and written outputs; ii) surveys used to assess the population impact of partner projects; iii) central monitoring of CHORUS-wide indicators (e.g. website use); and iv) monitoring of capacity strengthening activities using a project reporting tool.

A project monitoring workbook has been designed which will be used to monitor each research project and other main activities in CHORUS. These will be updated on a quarterly basis in order to track progress with project activities and milestones and provide details on the main engagement, written and capacity strengthening outputs. They will be updated by partners on the shared drive and feed directly into the central CHORUS output repository.

5.4 Approach to managing finances

The budget for the core costs of CHORUS is as defined in the proposal, and the project costs are split between 2 large projects per country, plus small and desk studies. We also propose to have an innovation fund to be applied for by partners in a competitive process to encourage south-south collaboration and to maintain a dynamic element to the RPC that can respond to windows of opportunity. Project and competitive fund applications will be agreed by the Executive Committee. The revised budget using the FCDO financial proforma is attached as Annex 12.

The CHORUS Finance Framework in annex 13 details the financial processes established. The UoL Programme Manager will work closely with the Finance Managers at each partner organisation to establish close working relationships and ensure communication and transparency on financial matters. Forecasts will be provided at the start of each financial year, with revisions on a quarterly basis, adjustments communicated, and under / overspends closely monitored. Variance and top-level reporting will be included in Management Team meetings. Partners will complete a standardised expenditure report based on actuals and provide accompanying evidence and narrative initially on a monthly basis, moving to quarterly once processes are fully established. The quarterly financial reporting by partners will be aligned to the quarterly tracking of project activity and milestone progress reporting. Partner costs will be collated and reconciled with the UoL quarterly costs and full CHORUS expenditure will be reported to FCDO by month end after the relevant financial quarter. The Programme Manager will monitor the financial activity of the RPC closely, with policies and guidance adhered to and value for money maintained. A full summary of financial standing and compliance with the Supply Code of Conduct will be provided on an annual basis. The CHORUS Oversight Committee will oversee the finance and governance of the RPC. Up to date risk and asset registers will be maintained for the consortium as a whole (Annex 14 & Annex 15).

5.5 Achieving and monitoring value for money

During our inception year we have begun to put the systems in place that will help to ensure that the Value for Money (VfM) approaches listed in the proposal are realised.

For the *overall management and cross-cutting programme activities*, these actions include: i) heavy use of electronic communication for most meetings and a substantial proportion of capacity strengthening activities; ii) use of Action Learning Groups throughout the programme to encourage shared learning and transfer of skills across the consortium; iii) decentralising core functions including CEO and later Research Uptake and Capacity Strengthening. Embedding these capabilities across consortium partners will strengthen VfM by increasing sustainability of developed capacity; iv) prioritising inclusion of policy actors in the design of our work from the start so that we can synchronise work with policy and budget cycles increasing the likelihood that research influences policy & practice.

For *research projects*, VfM actions include: i) a project planning template to be used for scoping out all CHORUS projects that emphasises the need to focus on research that meets the needs of the population and is embedded in what policy makers feel is feasible and can be achieved within public budgets; ii) Logframe indicators that focus on the extent to which the population and providers in poor communities benefit from the designed health system interventions; iii) a budget that is devolved as far as possible to country partners; iv) focusing on activities that can be undertaken across the partnership that will feed into multiple partner projects (e.g. planned scoping review of the role of urban public-private partnerships that will be used by 2-3 partners in their own projects); v) encouraging the use of existing evidence and secondary data sets and sources to help answer research questions. Investigating these sources is an explicit part of the project planning template.

For RU, VfM actions include i) continual and deep engagement with stakeholders at city and country level; ii) conscious use of frameworks to enhance prospects of routine implementation and scale up of effective health

system models iii) collaboration with other RPCs to amplify research findings, supported by a working group of RU leads across RPCs meeting regularly to update and share strategies, iv) strategic recruitment of CAG members to facilitate engagement with key global and regional academic and policy institutions and networks (e.g. WHO, WAHO, GCRF)

6 Approach to Open Access publishing and data sets

We have developed a publication policy for CHORUS, approved by the EC, (available on request) that emphasises high quality outputs, fair recognition in authorship, building the capability of research leaders, decolonisation to encourage south-led and south-to-south collaboration and overall transparency.

Publications, both peer and non-peer reviewed, will be identified as key milestones for all CHORUS activities and incorporated into the M&E framework.

We aim that all peer reviewed publications will be available as open access. Each country team has a budget to fund open access for journals that impose a charge. We will aim for **Gold** access, which ensures free access to the final published article immediately after publication. Where this is not possible, we will aim for **Green** open access so that articles are freely available shortly after publication through an open access repository (e.g. White Rose). We believe this is in line with the principles of 'Plan S'[2] on open access to scientific research which FCDO have endorsed. We will upload or link to all publications from our website. Other outputs will also be included on our website to ensure maximum accessibility.

Anonymised datasets will be made available through the Leeds data repository. We expect this to include all quantitative data sets and qualitative data sets if we can ensure true anonymity to participants (sometimes niche interviewing of a small group of interviewees may make true anonymity infeasible).

At the study planning stage, we will create data management plans (DMPs) for all discrete studies that generate primary data as part of one of the RPC's projects. This will be done collaboratively between the relevant partner and UK members of the RPC. The DMPs will outline how each study will manage the data it collects during the study, including how data security and confidentiality will be maintained, and what formats data will be stored in, and how data will be shared and archived, including how data reuse will be enhanced via the creation of comprehensive methods documentation and dataset metadata, and again what formats data will be stored in to maximise reuse.

All datasets will be collected by partners, but UK colleagues will require frequent access to developing and final datasets. We will avoid collecting personally identifying data (PID) wherever possible, but where this is required the PID will be held separately to any "main" dataset wherever possible. For example, we do not retain PID in any study collecting quantitative data, but we will collect basic PID to allow us to identify participants in case they ask for their consent status to be amended, but this PID would be stored on a consent form held separately to any research data collected from those participants. Where this is not possible, e.g. in some interviews participants may discuss themselves or their role which may explicitly identify them, then we will seek explicit consent that they allow us to hold this PID data. For all studies we will seek consent from participants to share their data, unless there are clear and compelling reasons not to (in which case we would not share the data).

As per previous DFID policy, we will share all data within 12 months of final data collection and dataset finalisation or publication of results from the data, unless there are clear and compelling reasons why this cannot happen. The only likely reason we can foresee where any data would not be shared is if the participant(s) refused to consent to it being shared. Anonymised data will be indefinitely shared/archived through the University of Leeds data repository. If data cannot be shared as per previous DFID policy, it will be retained at the University of Leeds for a minimum of five years.

7 Approach to mainstreaming gender and equity

Within all the CHORUS cities, health outcomes and the health behaviours, exposures and access to quality health care which underpin them, are determined by individual and community identities. These in turn are shaped by wider social, political and economic structures and norms. Gendered identities intersect with other social stratifiers, including disability, ethnicity, religion, caste, and socio-economic status, resulting in inequity in health and well-being. Rapid urbanisation is changing gender and social norms; this presents opportunities to transform patterns of

[2] https://www.coalition-s.org/

discrimination and disadvantage. However, differences are often so engrained within societies and embedded within structures and systems that we often become blind to their existence and the resultant inequities remain unchallenged. These inequities can be seen both within health systems and within our own research organisations.

Identifying and addressing these inequities is a core principle of the CHORUS research consortium. We have outlined how we plan to do this below. We see this document as a work-in-progress. We will monitor our indicators, in line with our log frame milestones, throughout the life of CHORUS, to see how well we are addressing gender and equity within our research and our consortium and adapt our strategies and approach accordingly.

We will provide opportunities for all those involved in the RPC from senior managers to RU officers and early-career researchers to reflect on gender and its intersection with other social stratifiers, in order to create a positive and pro-active environment to address gender and equity within our management systems, practices and research. We have organised our gender and equity activities into 5 main approaches:

Approach 1) Leadership for Gender and Equity within CHORUS

Following our principles of strong southern-leadership, our gender and equity mentor is based within the ARK Foundation, Bangladesh. Dr Sushama Kanan who brings extensive experience of using gender and equity approaches, took on this role from May 2020 and is leading work to address gender and equity across CHORUS. Dr Kanan is supported by Dr Elsey, the co-research director who has 20 years of experience of working with national governments, NGOs and research consortia to address gender and equity within public health research. A gender and equity coordinator within ARK, Samina Huque is supporting gender and equity activities across the consortium.

Across CHORUS we are monitoring the proportion of senior roles held by women and those with an LMIC background, so far out of 15 (1 CEO, 2 RDs, 5 PIs, 5 Mentors, 2 RU regional leads) 9 are from an LMIC background and 6 are senior female leaders. With our capacity strengthening activities we aim to support mid-career, particularly female, researchers to take on more senior roles. Our current UK-based mentors will work closely with CHORUS partners to support identified mid-career researchers to become lead mentors.

In recognition of the additional societal and organisational challenges that frequently face female researchers, particularly in LMICs, within CHORUS we support and encourage lead female authors and authors from LMICs. This will be monitored using our indicator (output indicator 3.1) which aims for at least 50% of our publications to be led by a female author and at least 64% with an LMIC lead-author by 2026.

Approach 2) Drawing on our existing strengths to further build capacity

Establishment of **an action-learning group** which has a core-group of 5-8 members from all CHORUS partners. The objectives of the AL group are to:

- To strengthening capacity across the CHORUS team in methods and approaches of applying gender and intersectionality relevant to our research
- To strengthen the quality and rigour of our research and practice from a gender equity perspective

The AL group began meeting regularly starting in September 2020 and has so far met 5 times in the inception period. The first meeting allowed members to share their previous experience of gender and equity work and highlighted the extensive experience across the team. Further sessions have focused on the development of our gender and equity guidelines, approach and discussions on the gender and equity aspects of the planned project 1s. The activities of the group are recorded in a log after each session which documents solutions identified and allows space for partners to reflect on the effectiveness of these solutions following implementation. The Log will be a valuable way of tracking improvement in addressing gender and equity within our research.

Our **capacity strengthening strategy** includes a needs assessment of individual researchers and teams within CHORUS partners. This will identify strengths and gaps across all teams and inform plans for capacity strengthening activities such as training, mentoring and sharing of resources and guidelines to redress gender or social inequities.

Approach 3) Providing clear guidelines and training on gender and equity for CHORUS researchers

Dr Kanan and the AL group have worked together to develop a gender and intersectionality **guideline** which includes details of frameworks and resources for our teams to draw on at each stage of the research cycle. The examples used within the guideline are based on previous work of CHORUS partners in urban areas in their country contexts. The guideline is available on request.

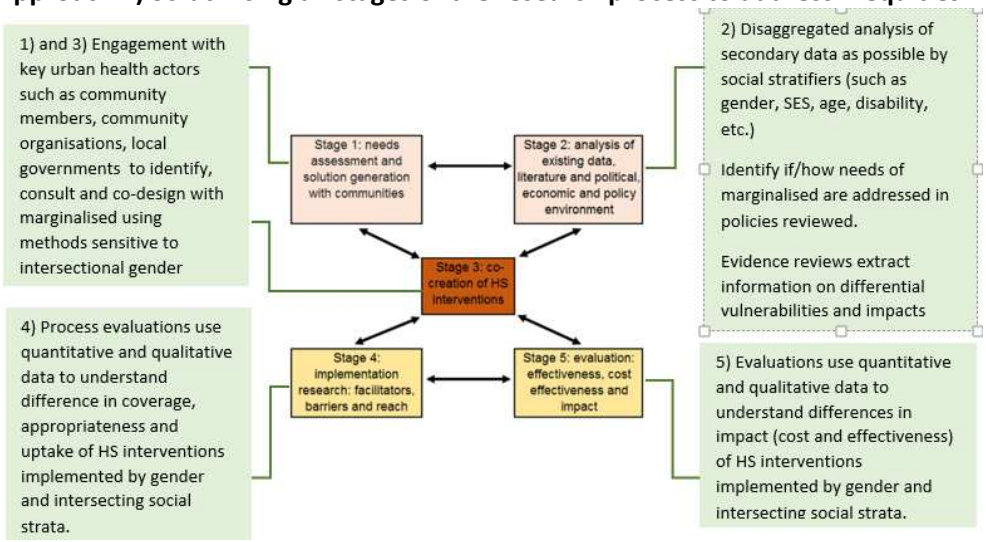
Key frameworks to support gender and intersectionality within research and HS intervention development have been shared and explained within our inception meeting and within the AL group. Following the findings of the capacity strengthening assessment we will identify the most appropriate ways to support CHORUS researchers to

internalise and use the gender equity guidelines; this may be through webinars, face-to-face training, activities within the AL group or the development of further resources.

Approach 4) Facilitate actors within cities to address gender and equity

We will work with a range of actors, relevant to each CHORUS project, in each of the CHORUS cities to appreciate and respond to issues of inequity. We will use and adapt the guidelines and training developed for CHORUS researchers to meet the needs of these different actors. This will depend on the specific nature of the CHORUS project in that city. For example, in Pokhara, Nepal CHORUS supporting local government to collect and use data is a key part of project 1, and working with government staff to disaggregate routine data by gender, caste, disability, poverty and how to use this to address and monitor inequities. In Accra, Ghana, using a gender analysis with the CHPS programme to identify ways to ensure CHVs and CHOs are motivated and supported in complex urban environments.

Approach 4) Scrutinising all stages of the research process to address inequities



The green boxes above highlight how we will address gender and equity throughout our research. We will ensure this happens through a number of mechanisms:

a) Addressing gender and equity is a key criteria for our **internal peer-review** of project plans and protocols, this criteria has been applied during the recent virtual project workshops allowing specific gender and equity feedback to be provided to the project-leads.

b) Gender and equity is also a key criteria within our external peer-review by **CAG members** of all protocols for CHORUS projects, including project 1, 2 and any innovation fund protocols and oversight of CHORUS structures and activities to promote gender and equity within our teams.

c) A key role of the **ALG** is to enable partners to share aspects of their research and discuss how they can strengthen their approach and methods to more rigorously identify and respond to gender and equity issues.

Approach 6) Integrating gender and equity considerations into RU and communications plans and activities and Amplifying findings on gender and equity through our outputs and RU activities

We will conduct capacity strengthening and raise awareness across all our partners and stakeholders we work with in cities of the importance of integrating gender and equity considerations into policy and program design, implementation, monitoring and evaluation and advocacy and communication efforts for urban health. The work in each country will be led by the country RU lead. It will include gender and equity training for media, civil society organisations, local governments, frontline providers and managers as well as central policy and program decision makers.

Beyond scientific peer reviewed publications, we will use social and other media such as twitter, blogs, local newspapers, documentaries etc to disseminate and amplify findings of relevance to gender and equity.

8 References

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9 List of Annexes (separate files)

Annex 1: Aims and Approach of CHORUS, Plain English Summary
Annex 2: CHORUS Workplan
Annex 3: Responses to Peer Review of the CHORUS proposal
Annex 4: Inception year logframe compliance
Annex 5: CHORUS References from CAG
Annex 6: Theory of Change
Annex 7: Research Uptake Strategy
Annex 8: Capacity Strengthening Strategy
Annex 9: CHORUS Management Organogram
Annex 10: CHORUS Logframe (years 2-6)
Annex 11 Notes to the CHORUS Logframe (years 2-6)
Annex 12: Financial Proforma
Annex 13: Financial Framework
Annex 14: CHORUS Risk Register
Annex 15: CHORUS Asset Register