Department of Health & Social Care

Annual Review 2022 - 2023 UK-Public Health Rapid Support Team

Published 05 July 2023

Contents

Abbreviations list

Abbreviation	Term
Africa CDC	Africa Centers for Disease Control and Prevention
AvoHC	Africa Volunteer Health Corps
CARPHA	Caribbean Public Health Agency

Abbreviation	Term
CMT	Core Management Team
Co-PI	Co-Principal Investigator
DHSC	Department of Health and Social Care
EDI	Equity, Diversity and Inclusion
EHRs	Equity and Human Rights
EPR	Emergency Preparedness and Response Division, Africa CDC
ETUs	Ebola Treatment Units
EVD	Ebola Virus Disease
FCDO	Foreign, Commonwealth and Development Office
FCL	Flight Case Laboratory
FELTP	Field Epidemiology and Laboratory Training Program
FETP	Field Epidemiology Training Programme
GHS	Global Health Security
GOARN	Global Outbreak Alert and Response Network
GRAS	Groupe de recherche-Action en Santé Burkina Faso
HRM	High Resolution Melt Curve
IPC	Infection, Prevention and Control
KEMRI	Kenya Medical Research Institute
LMIC	Low- and Middle-Income Countries
LSHTM	London School of Hygiene and Tropical Medicine
LSTM	Liverpool School of Tropical Medicine
MHPSS	Mental Health and Psychosocial Support
MoH	Ministry of Health
MRCG	Medical Research Unit the Gambia
ODA	Official Development Assistance
PI	Principal Investigator

Abbreviation	Term
RAG	'Red' 'Amber' 'Green' traffic light monitoring system
RFAs	Requests for Assistance
RRML	Rapid Response Mobile Laboratory Minimum Standards
SDGs	Strategic Development Goals
SOPs	Standard Operating Procedures
ToC	Theory of Change
ToR	Terms of Reference
UK-PHRST	United Kingdom Public Health Rapid Support Team
VFM	Value for Money
VOCs	Variants of Concern
WGS	Whole Genome Sequencing
WHO	World Health Organization

1. Summary and overview

Project Title: UK Public Health Rapid Support Team (UK-PHRST)

Project Value (full life): £36,500,000 (2016 - 2025)

Review period: 1 April 2022 - 31 March 2023

Project's Start Date: 1 April 2016

Project's End Date: 31 March 2025

Summary of project performance

Year	2020 / 21	2021 / 22	2022 / 23
Project Score	A	A	A
Risk rating	Amber - Green	Amber - Green	Amber - Green

1.1 Outline of project

The UK Public Health Rapid Support Team (UK-PHRST) works to address the threat posed by outbreaks of infectious diseases in low- and middle- income countries (LMICs) through an integrated a triple remit incorporating:

- Outbreak response: to rapidly investigate and respond to disease outbreaks at source in LMICs to stop a public health threat from becoming a broader health emergency by deploying specialist public health experts in as little as 48 hours

- Research: to deliver rigorous research with partners to improve the evidence base for best practice in epidemic preparedness and response

- Capacity strengthening: to build technical capacity for an improved response to future disease outbreaks in LMICs

The UK-PHRST is the primary mechanism for the UK Government to deploy technical expertise in outbreak response to ODA-eligible countries.

Funded by DHSC ODA, UK-PHRST is partnership between the UK Health Security Agency (UKHSA) and the London School of Hygiene and Tropical Medicine (LSHTM), established in 2016 in response to lessons learned from the West Africa Ebola outbreak.

1.2 Summary of progress

The UK-PHRST has continued to make good progress against a number of outputs, as well as taking significant steps to set strategic direction for this phase. Nine deployments have been completed in 22/23, as well as a completed research plan which has received positive feedback from peer review, and work is underway on a strategic narrative for capacity strengthening work this phase.

1.3 Progress against recommendations

This section includes a progress against recommendations from the last review.

Recommendation from last year	Progress	Current status
Capacity development: Deliver sustainable, impactful capacity development projects. Produce a high-level narrative of key objectives and outputs	22 capacity strengthening initiatives (courses, technical workshops, joint monitoring visits, CoPs etc) have been delivered in Y7. Forty capacity strengthening activities have been agreed	Partially achieved

Recommendation from last year	Progress	Current status
of this pillar and key partners for the UK-PHRST in an updated capacity development framework, with plan for this phase signed off by end 2022.	to be progressed (updated in Q4, March 2023). A high-level narrative capturing key objectives, outputs and pillars is underway.	
Research: Develop and begin implementing a research plan for the next phase (signed off by end 2022) that details activities supporting the UK-PHRST Research Strategy priority themes, including identification of key LMIC partners and routes to improved uptake of research evidence into best practice supported by the creation of an implementation science team.	UK-PHRST used a systematic approach involving stakeholder interviews, partner workshops and an evidence gap analysis to develop a collaborative, multi-disciplinary 3-year research plan that meets LMIC partners' needs and addresses gaps in evidence. The research plan includes 17 cross-discipline research projects that were co-identified and will be co-delivered with LMIC partners and addresses priority themes outlined in the UK-PHRST research strategy. The research plan has undergone an external academic peer review with positive feedback from reviewers. The creation of an implementation science team is underway with 2 successful appointments and one recruitment pending.	Achieved
Deployments: Actively explore increased bilateral deployments, working with Foreign, Commonwealth and Development Office (FCDO) colleagues including at Post and LMIC partners including research organisations and national public health institutes. UK-PHRST proposes to target at least 6 government or partner	UK-PHRST actively engaged with FDCO during outbreaks to offer bilateral support. In addition, DHSC have widely shared the UK-PHRST deployment offer with FCDO colleagues, including with the science and innovation and health advisor networks. Work has progressed on a joint concept note for coordinated deployments between the Emergency Preparedness and Response (EPR) Division of the Africa Centres for Disease Control and Prevention	Partially achieved

Recommendation from last year	Progress	Current status
organisations to further explore bilateral deployments.	(Africa CDC) and the UK-PHRST.	
Partnerships: Strengthen the UK-PHRST's partnerships with LMIC institutions by creating a shared vision and mutual goals. Deliver a partnership plan (signed off early 2023) which sets out priority LMIC partners with shared objectives and planned deliverables	A Partnership Plan was developed and agreed in early 2023 incorporating priority LMIC institutions and mutually agreed outcomes across the UK-PHRST triple mandate. Furthermore, our Partner Atlas, which maps our network of partners, was delivered to understand the past, current and future reach for the UK-PHRST partnership network.	Achieved
Equity and human rights (EHRs): Work to fully embed equity and human rights across all areas of the programme, including producing evidence that consideration of equity and human rights is included in evaluation for all UK-PHRST activities by end of the year, including the logframe.	Embedding EHRs across programme and advocacy for this, as a priority area of outbreak work, was determined to be appropriate and likely to be more successful with international partners if UK-PHRST was able to practically demonstrate the consideration we had taken and the effectiveness of prioritising this component within internal processes and outbreak work. This has included developing training in recognition and understanding of social equity issues across work specialisms, advising international partners and internally across projects, providing written and verbal human rights briefs ahead of deployments, integrating social equity related aspects of deployments to field deployment training and developing guidelines/ support to researchers with the expected EHR considerations throughout the research process. Discussing and presenting on this work and building a network with this focus has	Partially achieved

Recommendation from last year	Progress	Current status
	attracted the interest of international partners (Africa CDC, Africa Centre for Health Systems and Gender Justice) who have agreed to work together on social equity focused capacity strengthening activities, including development of sex and gender analysis in outbreaks training. Indicators to measure equity were reviewed and included in the Y7 logframe.	
High-level programme management: Ensure the project is compliant with the (FCDO) programme operating framework by end of 22/23, including completing a climate risk assessment.	DHSC have completed an audit which found the project to be compliant with the FCDO programme operating framework. A climate risk assessment has been completed by DHSC and indicated a low risk. We will continue to ensure activities adhere to the FCDO operating framework.	Achieved
Financial management: Reduce underspends to ensure spend is at least 90% of budget at the end of the financial year through overprogramming and realistic financial forecasting.	Spend was 76% of budget in FY 22/23. Further details can be found in Section 7.5 Quality of financial management.	Not Achieved

1.4 Major lessons and recommendations

Financial management (continued from previous year): Reduce underspends to ensure spend is at least 90% of budget at the end of the financial year through overprogramming and realistic financial forecasting.

Deployments: Establish a protocol for joint deployments with at least one additional partner organisation.

Capacity strengthening: Capture the impact of capacity strengthening activities by:

- implementing strategic themes and reporting on progress using these
- ensuring partners set outcomes for capacity strengthening projects and measuring progress against these outcomes
- ensuring there is at least one opportunity for DHSC to discuss the impact of capacity strengthening work with partners

Research: Agree a workplan to implement the recommendations made through the peer review of the research plan, including considering sustainability in implementing research projects and updating the Technical Steering Committee membership by April 24 so that it is gender balanced and the majority of members are from non-LSHTM affiliated institutions, with one third from LMIC institutions.

Climate: Ensure the project's relevance with climate adaptation is captured in reporting.

Gender: Conduct research that builds the evidence base for gender equity in outbreak response field: begin the research project looking at IPC/gender. Ensure the RST is leading by example and facilitating access to support for women and early career researchers including signposting training where necessary.

2. Theory of Change

2.1 Summary of changes

Overall, the project's design as originally conceived remains fit for purpose.

A review of the existing Theory of Change (ToC) was undertaken in February 2022 to align with the UK-PHRST's work from Y7 onwards. The updated version includes the following changes:

Long term outcome/impact: Change in design to ensure the key outcomes for the UK-PHRST are clearer.

Intermediate outcomes: In the previous ToC, there was no focus on research or preparedness as an intermediate outcome, we expanded the intermediate outcome to read “UK and global response to epidemics (including in research support and capacity strengthening) improves in speed, effectiveness and efficiency.”

We continue to produce quarterly reports to the Project Board on the logframe which aligns to the ToC, outlining our progress over the period.

The Y7 Theory of Change is included in Annex 1.

2.2 Project's progress

This section details the progress towards contributing to the expected outcomes and impact in the Theory of Change.

2.2.1 Impact Progress

Through our annual partner surveys, UK-PHRST has identified that 56% of partners noted improvement in infrastructure, personnel, and evaluation because of the project's contributions. The majority (52%) of these partners reported moderate to major impact. UK-PHRST is committed to also improving further in recognition of those surveyed who felt minor or no project contribution was made on this impact.

2.2.2 Outcome Progress

Deployment impact: The UK-PHRST has contributed to epidemic preparedness and response through technical collaboration with partners. Partner institutions identified tangible contributions made by the UK-PHRST team in 100% of UK-PHRST deployments.

In Year 7, UK-PHRST has successfully completed 9 deployments, as well as supporting epidemic preparedness and response through:

1. technical collaboration with partners
2. well trained deployed staff
3. shared and co-developed resources (Outcome 1 and Output 2)
4. relevant research which influences policy at local, national, regional and international level (Output 2).

All indicators have been achieved or have exceeded the annual targets.

Research impact: The UK-PHRST has made significant progress towards its aim to deliver research that contributes to a robust body of evidence in public health practice and policy to improve outbreak preparedness and response.

With a new research strategy underway and ambitious indicators to help establish a greater sense of equity and collaboration in our work, we have set the bar high and witnessed very good progress towards the achievement of these indicators. We are on the right track to ensure that our research conceptualisation, design, delivery and uptake are collaborative, equitable and useful.

33% of partners surveyed had shared their findings with policy or decision-making bodies/forums. This finding suggests a need to highlight to researchers at research inception the usefulness of bringing on board key decision-making stakeholders at the start of the study.

73% of partners from ODA-eligible countries assess research collaboration with UK-PHRST as equitable and 100% assess it as useful.

Capacity strengthening impact: According to the UK-PHRST annual survey, 100% of respondents who participated in activities with the UK-PHRST felt that they/their colleagues were able to apply the skills to a major or moderate extent. There have also been lessons learned which highlighted the need for greater level of tracking for skills application drawing more on local capacity which UK-PHRST will progress in Y8.

Evidence gathered from the UK-PHRST's annual partner survey identifies specific areas in which the UK-PHRST, alongside our partners, has made a difference and contributed to supporting longer term and sustainable outbreak management:

- 94% of respondents agreed that UK-PHRST deployments fully contributed to improving their country's or region's public health response
- 60% reported that the UK-PHRST had made a major to moderate contribution to national policy, guidance or plans to support outbreak preparedness and response
- 52% reported a major to moderate contribution by the UK-PHRST and our partners in support of their longer term and sustainable outbreak management approaches and activities.

2.3 Changes to the logframe

A review of the logframe was conducted in February 2022 in conjunction with the Theory of Change update.

Overall impact remained fit for purpose but the 3 previous outcomes were updated to become less UK-PHRST centric and instead focus on the project's ongoing commitment to co-delivery and collaboration across each of the remits.

The number of outputs were doubled to reflect the updated outcomes and further indicators were included to identify partner perceptions and feedback.

Deployment outputs: were amended to more accurately reflect timeframes for deployment requests by removing 48-hour approval indicator.

Research outputs: were introduced to monitor the authorship of publications and measure the visibility of research findings.

Capacity strengthening: outputs reviewed to focus on providing longer term capacity initiatives at all levels (individual, organisational and systemic) and monitoring of learning and reflection.

The Y7 logframe can be found on the UK-PHRST development portal page.

3. Detailed output scoring

3.1. Output 1

Output score: A+

Impact weighting (%): 33.32

Weighting revised since last AR? unchanged

Risk rating: Green

Risk revised since last AR? unchanged

Output 1.1. UK-PHRST trained team members deployed to provide effective support for epidemic preparedness and response within ODA eligible countries

Indicator	Milestone for the review	Progress
Proportion (%) of deployments that occur within requested timeframe	100% occurred within timeframe	Achieved - all deployments occurred within requested timeframe
Proportion (%) of deployments assessed as useful by partners.	80% assess as useful by partners	Surpassed - 100% deployments assessed as 'useful' (94%) or 'fairly useful' (6%) as part of the routine partner feedback mechanism

Output 1.2. Tried and tested resources that support deployments are available or co-developed and shared to support epidemic preparedness and response

Indicator	Milestone for the review	Progress
No of resources made available or co-developed and shared.	10 resources made available or co-developed and shared	Surpassed - 18 resources made available, developed or shared
Proportion of partners from ODA-eligible countries who assess resources as useful.	80% of partners assess resources as useful	Surpassed - 100% of partners that have accessed resources provided during deployment as useful as part of the routine feedback mechanism

3.1.1 Supporting narrative

Output 1.1 relates to the timeliness and effectiveness of the UK-PHRST's deployment activities.

In total, 9 deployments occurred in Y7. Deployments took place to Burkina Faso, Czech Republic (in support of the Ukrainian refugee crisis), Papua New Guinea, Slovakia, Solomon Islands, Uganda and Malawi. All requests to UK-PHRST during the year have been responded to with fully trained and appropriately qualified staff. UK-PHRST staff were ready to deploy within the agreed timeframe. Following each deployment, lessons were identified through a post-deployment debrief and summarised within End of Mission reports

Throughout Y7, partners have expressed very positive comments about both the quality of UK-PHRST’s technical input and staff. In post deployment surveys 100% of partners rated the UK-PHRST's contribution as useful.

Output 1.2 measures the number of resources (and type) used in the deployment. The resource is either an adaptation of an existing resource (e.g. a refurbished tool) that is shared with the partner or one that is jointly developed during the deployment.

Both targets related to resource development have been exceeded in Y7. Examples of resources made available or co-developed and shared during UK-PHRST deployments include:

- The development of a new technical toolkit to support Yellow Fever case management implementation in affected countries (WHO deployment to Burkina Faso).
- 14 core Standard Operating Procedures (SOPs) were developed for the Ministry of Health in Uganda during 2 IPC related deployments on the Ebola Virus Disease response (EVD).
- Further tools and SOPs were developed in country including:
- SOP IPC discharge procedures for patients discharged from Ebola Treatment Units (ETUs).
- SOP for managing waste from ETUs.
- A review and update of the EVD screening algorithm for health facilities in collaboration with the MoH and CDC.
- An analysis template developed for use by data officers at the health facility level to assist the cholera outbreak in Malawi.

3.1.2 Changes to the output

Output 1.1 was reviewed and revised in Y7 to incorporate recommendations from the previous review. The '48-hour approval' indicator was modified to reflect the timeframe as requested by partners. We trialled monitoring during or immediately post deployment to enable real-time feedback.

Output 1.2 is new to the Y7 logframe and incorporates the previous indicators related to resource development that were listed in output 1.1 of the Y6 logframe with an increase to the target indicator from 4 to 10 resources.

3.1.3 Recommendations

In Y7 we modified the '48-hour approval' indicator for **Output 1.1** to reflect the timeframe as requested by partners, rather than an internal UK approval deadline. This indicator still

proves problematic to measure as timelines for deployment are generally not specified by partners and readiness to deploy is most often determined by logistical factors, e.g., approval of visas. In Y8 we propose removing this indicator.

More generally, milestones for this output will be revised and made more ambitious in response to all indicators being surpassed during this reporting period.

Case Study: Uganda Deployment

The Uganda Ministry of Health (MOH) declared an Ebola outbreak of Sudan Virus Disease between 20th September 2022 and 11th January 2023. A total of 164 cases and 76 deaths were reported across 9 districts. The WHO requested Infection Prevention and Control (IPC) support from UK-PHRST via the Global Outbreak Alert and Response Network (GOARN). UK-PHRST deployed 2 IPC Specialists; one as the WHO IPC Pillar Lead for 12 weeks and the other as the WHO IPC Team Lead in Jinja District for 6 weeks. They provided technical assistance to the MOH and implementing partners, supported partner engagement and coordination, developed IPC technical resources, delivered training, and completed field visits to strengthen IPC implementation. Examples of achievements from the Uganda deployments include:

Technical assistance and resource development: Development of a national IPC readiness and response strategy, rollout of the IPC assessment scorecard (6,526 facilities assessed), and development of IPC SOPs and tools.

Coordination and partner engagement: Co-chaired the IPC taskforce with MOH, supported IPC partner mapping, and coordinated the delivery of IPC kits to health facilities.

Capacity strengthening: Delivered a series of IPC webinars reaching 986 frontline health workers. Completed supportive supervision visits to health facilities in Kampala and Jinja District. Support to isolation and treatment units' set up, training, operation, assessment and action plans.

Transition to recovery: Supported MOH in the development of IPC priorities, activities, and budget for the 6-month recovery plan and supported the development of a draft 5-year IPC strategic plan to institutionalise IPC in Uganda.

The outbreak was declared over in January and the UK-PHRST received very positive feedback from the Ministry of Health about the support provided. Input into strategic plans will support the response to future outbreaks.

3.2 Output 2

Output score: A

Impact weighting (%): 33.32

Weighting revised since last AR? unchanged

Risk rating: Green

Output 2.1. Relevant research equitably identified and delivered

Indicator	Milestone for the review	Progress
Proportion of jointly developed and delivered research studies.	80%	Surpassed - 93%
Proportion of partners from ODA-eligible countries who are first or senior authors on peer-reviewed joint publications	25%	Not achieved - 20%

Output 2.2. Research findings influence practice and policy at local, national, regional and international levels through identification of and engagement with appropriate pathways

Indicator	Milestone for the review	Progress
No of publications/other research outputs produced from UK-PHRST and partner research	15	Surpassed - 24

Indicator	Milestone for the review	Progress
No of pathways/ avenues engaged with to make research findings more visible.	5	Not achieved - 4
Proportion of partners from ODA-eligible countries who assess pathways/ avenues to be effective in making research visible and potentially useable.	80%	Surpassed - 100%

3.2.1 Supporting narrative

Output 2.1 measures equity and collaboration in our research in line with the UK-PHRST Research Plan which aims to co-identify and co-deliver a programme of research with LMIC partners.

Of the 14 research projects undertaken or completed in Y7, 13 were jointly developed. In reviewing the research studies that were jointly developed, we have also examined the gender breakdown of principle investigators (PIs) and co-principle investigators (Co-PIs): 62% were men; 38% women.

Whilst the target on senior authorships has not been achieved for the year, this is a deliberately ambitious target to ensure we continue to strive for equity in research development and delivery.

In our annual partner survey, respondents were asked about the degree to which their research collaboration with UK-PHRST was equitable – at the differing stages of research. The table below demonstrates a good result with room for improvement in Y8 and Y9.

Research stage	Fully equitable	Somewhat equitable	Not sure	Not applicable/ too early
Research conceptualisation	66%	27%	7%	
Research design	80%	13%	7%	
Research	57%	7%	7%	29%

Research stage	Fully equitable	Somewhat equitable	Not sure	Not applicable/ too early
implementation				
Research publication	46%	8%	7%	38%

Output 2.2 measures the number or research outputs produced as a result of research project and the ways in which findings are disseminated for uptake.

The indicator related to the sharing of evidence to improve outbreak response was surpassed. Since April 2022 we have produced 24 publications, webinars, videos and workshops.

We partially achieved the indicator on expanding avenues where our research findings are exposed, considered and responded. We will continue to pursue this in Y8.

UK-PHRST's annual survey revealed that 100% of respondents who had shared their work in policy/decision making forums found it useful (67% – useful and 37% - somewhat useful).

Partners had expectations that their research would contribute to national or regional policy on outbreak preparedness and response in the future. Examples of these areas of contribution include:

- Developing a new strategy that could be incorporated into the national surveillance strategy.
- Improve understanding of human Mpox in Nigeria and strengthening research capacity of participating sites
- Supporting Africa CDC to understand the value addition its research makes toward emergency response in countries, developing plans/programmes to ensure sustainability of deployments outcomes within the served countries as well as from the deployed staff and partners engaged during emergency response. Contribute to developing quality surveillance systems.

The research plan for this phase of the UK-PHRST has been finalised in 22/23. This received an external peer review, with positive feedback from reviewers. Reviewers commended the breadth of research underway and planned, as well as the commitment to equitable design and delivery. Recommendations focused on reforming membership of the Technical Steering Group to improve gender balance and representation from LMICs and ensuring sustainability of outcomes. The UK-PHRST are producing a workplan to respond to these recommendations.

3.2.2 Changes to the output

In Y7 indicators for **Output 2.1** were introduced to monitor authorship of publications.

Measurable indicators of the pathways to impact of research activities have been included in Y7 **Output 2.2**.

3.2.3 Recommendations

No changes to **Output 2.1** and indicators are proposed for Y8. The indicator monitoring authorship is ambitious and much higher than the current baseline. With co-development and co-delivery of research now being the norm, we expect growth against this milestone in future years acknowledging this is not immediately achievable given the time lag from project co-development and publication of research.

A working group review of EDI considerations and prioritisation of social equity considerations throughout research project duration is underway in Y8.

Identifying key practice and policy stakeholders at the inception of the research to address **Output 2.2**. The research management team have adjusted the research proposal and reports in Y8 to incorporate this into studies.

Case Study: Research - A non-whole genome sequencing approach for monitoring SARS-CoV-2 variants

This UK-PHRST research study was undertaken between November 2021 and September 2022 as a response to the emergence and rapid global distribution of SARS-CoV-2, which highlighted the need for robust and adaptable surveillance systems to define and track novel variants of concern. The research was delivered in partnership with the Groupe de recherche-Action en Santé (GRAS) Burkina Faso, Kenya Medical Research Institute (KEMRI), MRC Unit the Gambia (MRCG) and Liverpool School of Tropical Medicine (LSTM). It tested the feasibility of running a High Resolution Melt curve (HRM) assay in LMIC settings through pilots in Burkina Faso and Kenya. Building on an established research partnership at LSHTM with the Gates Foundation-funded MALCOV study into malaria-COVID-19 coinfection, UK-PHRST rapid research funding enabled the team to leverage real-time access to MALCOV study specimens.

The project team developed the HRM analysis methodology which targets key SARS-CoV-2 variant-defining mutations. Combinations of mutations give unique signature profiles that define different variants and are targeted in a multiplex assay. Assay targets can be mixed-and-matched to accommodate locally important VOCs and can be rapidly updated with minimal revalidation. Updates can be undertaken locally in response to local sequence data, and/or to publicly accessible sequences shared via public health networks. The HRM assay was developed and updated in response to the emergence of new SARS-

CoV-2 VOCs. Analysis of samples from Burkina Faso and Kenya was completed and assay performance was validated against WGS. Due to a military coup in Burkina Faso training of Burkina Faso researchers and sample analysis was completed at MRCG.

This project demonstrated the utility of a non-WGS method in a lower resource setting in tracking SARS-CoV-2 variants. It showed HRM-based assays can provide a lower-cost approach to conducting molecular epidemiology as part of wider surveillance strategies, particularly in settings where access to WGS is absent or limited. It also provided training of in country researchers, and the project built new and developed existing collaborative working relationships between researchers from LSHTM, GRAS, KEMRI, MRCG and LSTM. The study team have begun further validation work to use the HRM methodology, in combination with WGS, to determine SARS-CoV-2 variants in a cohort of 27 hospitalised COVID-19 patients in the Gambia and Burkina Faso. This additional study will further validate the HRM method, and allow evaluation of different specimen types (nasopharyngeal, oropharyngeal swab specimens, saliva, faeces) for suitability of use with the HRM assay.

3.3 Output 3

Output score: B

Impact weighting (%): 33.32

Weighting revised since last AR? unchanged

Risk rating: Amber-Green

Output 3.1. Collaboratively delivered initiatives strengthen capacity of partners and UK-PHRST team at individual, organisational and systems level

Indicator	Milestone for the review	Progress
No and type of initiatives (courses, technical workshops, joint monitoring visits, CoPs etc.) that support capacity development/sharing of partners from ODA countries and UK-	10	Surpassed - 22 initiatives developed

Indicator	Milestone for the review	Progress
PHRST at the appropriate level		
Proportion of partners from ODA-eligible countries who report initiatives useful.	80%	Surpassed - 90%

Output 3.2. Reflection & learning are enabled with partners and internal to UK-PHRST

Indicator	Milestone for the review	Progress
No of reflection and learning opportunities (resulting from capacity development and other activities) held jointly with partners from ODA-eligible countries and internally within UK-PHRST	6 reflection and learning opportunities	Not achieved - 5 internally initiated learning opportunities
Proportion of participants who assess learning sessions as useful.	80%	Surpassed - 85%

3.3.1 Supporting narrative

Progress has been made in 22/23, with a significant number of capacity strengthening activities delivered. Work on a capacity strengthening strategic narrative is underway which will identify up to 5 key themes of UK-PHRST capacity strengthening activities and the anticipated impact of delivering against each one. We appreciate the efforts of the UK-PHRST to remain agile and responsive to partner needs.

The scoring of output 3 reflects the importance of prioritising the capacity strengthening activities to ensure they maximise impact across a few key themes and avoid the risk of delivering a long list of activities across numerous areas, which could reduce the overall impact at the end of this phase. We expect this will be addressed in future with the completion of the capacity strengthening strategic narrative.

Output 3.1 relates to the UK-PHRST's and partners' capacity strengthening and collaboration activities at all levels (individual, organisational and global)

Commitment in Y7 was made to accelerate and deepen capacity strengthening activities of the UK-PHRST and its partners. In Y7 the project appointed a Head of Capacity Strengthening to lead a new strategic approach. New governance processes have been developed alongside a global review of capacity strengthening. Capacity strengthening outcomes are difficult to assess immediately and this will need to be monitored over time to evaluate the sustainability of outcomes with partners.

The UK-PHRST delivered a range of remote and in person activities to support this output. Successes include:

- Mental health and psychosocial support (MHPSS) workshop for Mental Health and Emergency Focal points of 10 East/Southern African countries

- Contribution to review of the WHO Master Trainers' course for environmental cleaning & IPC in ODA-eligible countries

- Delivery of R training course in Nigeria Centre for Disease Control and Africa CDC. "R" is a statistical programming software on which training was provided to support Africa CDC’s Event Based Surveillance (EBS) team in the management and analysis of the COVID-19 data provided by their member states.

- A secondment of a Field Epidemiologist to support for the Caribbean Public Health Agency's Field Epidemiology program –the initiative to build CARPHA's FELTP workforce capacity for emergency and response

- Ongoing support to AVoHC (see case study)

Over the course of Y7, the majority of partners consistently rated the initiatives developed and delivered in conjunction with UK-PHRST as useful and valuable.

Output 3.2 relates to the UK-PHRST's internal and jointly developed reflection and learning opportunities.

In Y7 the UK-PHRST continued its planned learning schedule, initiating sessions on Mental health in public health emergencies – reflections on the Liberia workshop; R course Training; Cape Town Learning review. Over the course of Y7, where these events have been assessed feedback has been consistently positive.

In addition, UK-PHRST and partners participated in learning opportunities, mostly through the attendance of key conferences and workshops.

3.3.2 Changes to the output

Output 3.1 was updated to provide greater focus on providing longer term capacity strengthening initiatives at all levels (individual, organisational and systemic).

Output 3.2 is new to the Y7 logframe and incorporates a previous but now updated indicator related to the number of learning-oriented activities.

3.3.3 Recommendations

Specific capacity strengthening recommendations arising from the UK-PHRST learning review include:

1. Follow up and continue engagement post capacity strengthening activities to ensure that new capabilities are applied in partners' activities and made sustainable

2. Utilising centres of excellence/expertise locally to deliver capacity strengthening and support activities – leveraging local resources

The evidence from **Output 3.2** shows that opportunities for learning together with partners should be consistent, shared widely and inclusive. The UK-PHRST and partners should continue their learning sessions in Y8 with increased collaboration.

Case Study: Africa CDC Partnership: Africa Volunteer Health Corps (AVoHC)

The UK Public Health Rapid Support Team (UK-PHRST) continued to develop its partnership with the African Volunteer Health Corps (AVoHC) in 2022/2023, with the overall focus of supporting AVoHC to strengthen its capacity to respond to public health emergencies on the African continent.

UK-PHRST worked collaboratively with the AVoHC core management team to develop and refine content for AVoHC's new induction training course for rapid responders. This training course aims to enable new and existing volunteers to understand their role and expectations of them during deployments with AVoHC, as well as to develop soft skills that will support them in their roles.

Strong working relationships between UK-PHRST and AVoHC enabled valuable capacity sharing between both teams, which helped module developers to instil key lessons learnt from both organisations in the training content. A first-phase pilot of the induction training course was held in Lusaka, Zambia in November 2022. Experienced AVoHC rapid responders were invited to participate in the first-phase pilot and give feedback on the content of 8 fully developed and 4 partially developed modules. As active members of the facilitation team, UK-PHRST colleagues supported the collection of participant feedback and provided mentoring to AVoHC colleagues on module delivery. Participants were highly engaged in the first-phase pilot and appreciated the opportunity to share their experiences and give input into the development of a training course for their peers.

UK-PHRST continues to work with the AVoHC core management team to refine the content of each module based on feedback received during the first-phase pilot. A second-phase pilot is being planned in the coming months, after which the induction training course will begin to be rolled out to all AVoHC volunteers.

4. Project performance not captured by outputs

4.1 FCDO Programme Operating Framework

In 2022/23, UK-PHRST project team worked with DHSC to ensure the project meets compliance standards with the FCDO Programme Operating Framework which details how ODA projects should operate. DHSC has assessed that UK-PHRST is now in compliance with the guidance.

4.2 Climate Risk Assessment

DHSC has conducted a climate risk assessment (CRA) for UK-PHRST to demonstrate compliance with HMG directive to ensure to align all Official Development Assistance (ODA) to the goals of the United Nations Framework Convention on Climate Change (UNFCCC) Paris Agreement. The level of risk posed by the project's activities is assessed as low. The project will continue to monitor associated climate risks in accordance with the Green Finance Strategy.

To supplement the CRA, UK-PHRST would like to highlight the significance of the project's contribution to climate adaptation.

The links between the effects of climate change and infectious disease outbreaks are widely accepted. This is evidenced by a growing body of research which highlights the strong correlation between climate change and the incidence of human pathogenic disease. Climate change and natural disasters have increased the likelihood of water-borne, food-borne (very high confidence) and vector-borne (high confidence) pathogen transmission, with predictions indicating a continued rise in the near-term.

The project makes a significant contribution to climate change adaptation efforts due to its primary focus on outbreak response and the proven links between climate change and an increased likelihood of infectious disease outbreaks. For example, this year the UK-PHRST deployed to Malawi to support the response to the ongoing Cholera outbreak, which has been linked with the effects of climate change due to extreme weather events, which produced conditions that increased the likelihood of a Cholera outbreak occurring.

UK-PHRST has taken environmental protection into consideration for the ongoing phase of activity and produced a sustainability plan which outlines the project's approach to embedding environmental sustainability to all aspects of its work. As part of UK-PHRST CRA, DHSC has assessed that the project activities do not negatively impact the categories defined in the FCDO Programme Operating Framework. An assessment of the impact of the project on these categories is included below:

- **Greenhouse gases:** Project implementation could contribute to carbon emissions as a result of flights to and from partner LMICs where work takes place. Carbon offsetting practices are in place and monitored to mitigate and ensure minimal impact on the environment.

- **Biodiversity and land degradation:** No associated risk. There are interlinkages between infectious diseases, wildlife, and land degradation due to proximity-based transmission. Through reducing the impact of infectious diseases, UK-PHRST adapts to the impacts of land degradation and biodiversity related climate change.

- **Biohazard waste:** No associated risk. Biohazard waste is disposed of in line with the appropriate institutional policies. Policies covering Biohazard waste are in place at both LSHTM and UKHSA and can be shared on request.

- **Water quality:** No associated risk. Infectious diseases can be transmitted through poor quality water which UK-PHRST can help address through its triple remit.

5. Risk

5.1 Overall risk rating: Amber - Green

Risk management processes during this financial year have been greatly improved. The UK-PHRST continues to maintain a risk register for the project which is routinely reviewed centrally and with DHSC on a quarterly basis. The UK-PHRST is committed to sharing any potential risks with DHSC at the earliest opportunity to share plans to mitigate against potential issues and we hold regular quarterly meetings to discuss the risk register to facilitate this exchange. The introduction of quarterly risk meetings has significantly improved the project risk register. Key risks are also communicated quarterly to the UK-PHRST Project Board through the Director's Report. Significant risks to the project are escalated to DHSC Global Health Security Programme Board and internally through partner organisations.

Within the London School of Hygiene & Tropical Medicine (LSHTM), risk at the research project level is monitored and mitigated through weekly Research Coordination Meetings. Overall programme risk is monitored by the Research Operations Officer and Faculty Office.

Several key risks for the reporting period along with the mitigation taken are outlined below.

5.2 Overview of project risk

Risk description: UK-PHRST are unable to fully utilise funds due to recruitment delays leading to an underspend and inability to deliver all planned activities.

Mitigation strategy: Recruitment campaigns are ongoing to fill existing vacancies which are intended to be occupied in 2023/24. While vacancies are present, regular financial analysis is conducted to identify underspend likelihood early and escalate both internally and to DHSC, as appropriate, to mitigate impact. Quarterly reporting takes place with DHSC to agree repurposing of funds where possible. Activities which are disrupted due to recruitment delays are monitored and rescheduled for the following quarter/financial year where possible.

Residual risk rating: Amber

Risk description: There is a risk that the impact and work of the UK-PHRST is not sustainable or long lasting.

Mitigation strategy: Annual after-action reviews held with LMIC partners to assess UK-PHRST sustainability and gather feedback. Sustainability plan being implemented with a

sustainability working group established. Capacity strengthening plan continues to progress with guidance from DHSC and dedicated staff recruited on this aspect of the triple remit.

Residual risk rating: Amber

Risk description: There is a risk of a safeguarding incident occurring.

Mitigation strategy: Mandatory safeguarding training for all UK-PHRST staff as part of onboarding process (online and as part of deployment course) and additional safeguarding training to be delivered by external expert. Clear reporting and investigative processes and responsibilities through existing safeguarding governance systems, including ensuring that project stakeholders are aware of whistleblowing/incident reporting procedures. Deployed staff handbook to include further recommendations and processes established during safeguarding and incident management review.

Residual risk rating: Amber

6. Project management

6.1 Delivery against planned timeframe

This year marks the first year of the current phase of the UK-PHRST (April 22-March 25). The UK-PHRST has made significant progress against its objectives over the past 12 months.

6.2 Performance of partnerships

The DHSC Global Health Security programme, UK-PHRST and the National Institute for Health Research (NIHR) continued to build on their well-established and supportive working relationship in 2022/23. The UK-PHRST Partnership Agreement between the UK Health Security Agency (UKSHA) and LSHTM has been approved, allowing for clear delegation of responsibility, and co-leads continue to strengthen partnerships. Greater clarity of the output and outcome indicators have led to clearer, more informative progress updates in the quarterly logframe reports. Work continues to agree the key strategic themes for capacity strengthening, these are now being finalised, after some initial back and forth to establish exactly what was required.

6.3 Asset monitoring and control

UK-PHRST Asset Management Standard Operating Procedure draws on UKHSA, LSHTM and DHSC asset management policy to ensure that the project's approach is consistent

with the standards required. UK-PHRST is working with DHSC to finalise the policy requirements on this.

The project team holds a live account of all assets in their Asset Inventory, which is shared annually with DHSC for review. The inventory tracks the price, status, procurement date (etc) of assets to ensure accurate monitoring and effective logistical oversight.

DHSC GHS team has assessed that the current UK-PHRST asset management and disposal practices are consistent with DHSC expectations and wider FCDO operating framework requirements.

7. Financial performance

7.1 Value for Money

An updated benchmarking analysis took place in Y7 to ensure the UK-PHRST deployment model continues to provide value for money.

7.2 Economy

The current system of a core team who not only deploy but also lead on capacity development and research with surge capacity is seen as cost effective whilst also allowing UKHSA and LSHTM to build up its knowledge and experience of real time public health emergencies.

The reservist recruitment has been reviewed and a decision has been taken to operate a two-tier approach to reservist recruitment. The aim of this is to ensure cost effectiveness of the programme and to attract a diverse and highly skilled reserve cadre.

Tier 1 reservists will maintain up to date medical and training certification and will be available for immediate deployment with signed agreements from their manager and either a UKHSA or bank contract in place.

Tier 2 reservists will no longer require medical or SAFE training to remain in date, and subsequently will not be available for immediate deployment. This group will be informed of capacity strengthening and research support requests and if available for planned support will be provided with the required OH support and training to travel.

7.3 Efficiency

The UK-PHRST programme has well-established standard governance and externally audited procurement policies and procedures that ensure that the delivery of UK-PHRST is

as cost effective and efficient as possible. This is evidenced by the fact that outputs have been achieved and the project is on track to deliver on desired outcomes.

There are a number of tools used to track inputs into outputs. The UK-PHRST 4 interventions in the ToC - 'response', 'research, 'capacity strengthening' and 'cross-cutting activities' translate directly into the project's implementation plan and individual workplans. Tracking of performance against logframe outcomes and outputs takes place on a quarterly basis providing an opportunity to review/adjust implementation if needed.

Recommendation: the current monitoring report structure makes it hard to capture unintended outputs which are sometimes extremely valuable and important and the programme will look to establish mechanisms to improve on this in Y8.

7.4 Effectiveness

The UK-PHRST has continued to work effectively to deliver increased outputs across the project despite workforce capacity challenges, and has largely succeeded in doing so. This demonstrates that the project is being delivered effectively.

A significant revision to the Y7 logframe was undertaken to better demonstrate and track outputs into outcomes. We continue to monitor and review effectiveness on a quarterly and annual basis. Additional feedback mechanisms have been put in place in Y7 to assess partner feedback on the UK-PHRSTs effectiveness.

7.5 Equity

Consideration of the Equity and Human Rights (EHRs) dimensions to the project development process and cross-programme UK-PHRST work have been strengthened by the support of the Equity and Human Rights Adviser and the team’s focus to engaging with and prioritising social equity considerations across the multi-disciplinary outbreak work. This has included the EHRs Adviser’s participation in work across projects, development of resources and the team’s review and development of deployment and research processes.

Internal undertaking of rapid social equity analysis in the early stages of outbreak response work, as well as determining its useful dissemination, would be a key advocacy tool to demonstrate the importance of this aspect of outbreak work to partners and enable its integration into wider outbreak response work.

7.6 Quality of financial management

UK-PHRST spend in 22/23 was £3.8m (76%) of the total £5 million budget.

Monitoring systems to track budget utilisation of LSHTM, UKHSA and our partners' expenditure are in place with the UK Core Management Team (CMT) meeting monthly to review and address budget related issues.

Recruitment of new posts to bring the team to full capacity was slower than an anticipated due to challenges in UKHSA HR, and the number of simultaneous recruitments across the programme. These recruitment delays continued to delay project delivery deadlines and contributed to underspends. UK-PHRST updates DHSC with progress on filling vacancies and on the impact of failure to recruit on project delivery.

UK-PHRST provides regular forecasts and actual spend figures to DHSC and NIHR on a quarterly basis. NIHR Central Commissioning Facility (CCF) monitor LSHTM's finances on behalf of DHSC. UK-PHRST also provides ad-hoc financial data, when possible, should DHSC request it. When accurate financial data cannot be supplied on a non-routine basis, UK-PHRST provides rationale and offers alternatives to DHSC.

Quarterly finance meetings are hosted by DHSC and are well attended by UKHSA, LSHTM and NIHR CCF colleagues to discuss expenditure incurred, remaining quarterly forecasts, risks or assumptions built into forecasts, and agree contingency plans for potential underspends. Discussions are productive, with all parties committed to resolving any issues in pragmatic ways.

Recommendation for 23/24: Overprogramming should be practiced in UK-PHRST as a tool to manage the risk of potential underspends. This would be appropriate given the likelihood of underspend occurring and the ongoing vacant posts.

Date of last narrative financial report: 25 May 2023

8. Monitoring Evaluation and Learning

8.1 Evaluation

UK-PHRST evaluations (internal and external) are designed to enable learning and actual use of the findings. Plans for an external evaluation of the programme during the new three-year funding cycle are currently underway:

Phase 1: We will address 2 studies on partnership and capacity development in 2022/2023. Phase 1’s evaluation is designed to generate significant learning on how partnership and capacity development in UK-PHRST’s work are defined, understood and brought into practice. It will also provide input into the phase 2 evaluation/end-line evaluation and on how the next project iteration should be adapted to make for an even

more impactful project. An external evaluation consultancy has been selected via a competitive tender process and work is due to commence in Y8 Q1.

Phase 2: Endline impact/outcomes evaluation (to take place in 2024/25)

The primary purpose of this evaluation is to generate in-depth learning about the impact, effectiveness, efficiency and sustainability of the project through a participatory approach.

8.2 Monitoring

The UK-PHRST logframe connects project outputs to intended outcomes and their long-term impact, with indicators defined for each level.

Indicator reference sheets were developed and refined to describe each indicator in detail and outlining the data and evidence required to support progress against the target.

Data collection takes place 'live' via a monitoring sheet for the majority of outputs whereby data is recorded and evidence linked. Collection for qualitative indicators related to partner perspectives took place via an online survey in Q4.

We continue to use the traffic-light reporting approach developed in Y6 and produce quarterly reports to the UK-PHRST Project Board.

8.3 Learning

The UK-PHRST has adopted 3 main learning approaches over the course of the year to capture and share lessons learned. Working alongside our partners, we have held reflection sessions that consider the value and application of activities we have been involved in across the 3 pillars. These have included regular bi-monthly 90 minutes virtual reflection and learning session on a variety of topics. Additionally, we have held one-off learning sessions that bring together a sizeable group of partners working to a more structured learning agenda.

An example of this was the Cape Town review held in September 2022. A number of our partners have offered detailed feedback on the value of the learning sessions and engagement with the UK-PHRST in the form of short articles. This is currently being compiled for publication. Finally, we have surveyed partners to receive anonymised feedback on the quality, usefulness and impact of our work.

From the Cape Town review we identified the following lessons:

1. Partners welcome the opportunity to sit with their UK-PHRST colleagues and reflect on what is working and what could be improved in our mutual areas of work.

2. They especially appreciate the opportunity provided by such events to consider whole system approaches to outbreak response, research and capacity strengthening.

3. They want us to continue prioritising co-creation in the development of all activities and they recognise the challenges that underpin our mutual aspiration to ensure that equitable research and other practice define our work.

4. Mental health is seen as crucial and fundamental to all activities as is human rights and gender equity and these should be embedded across our work.

5. Openness of discussion among participants and our ongoing communication are appreciated and seen as vital to successful collaboration.

6. The presence of senior management at the event was also noted and signalled the importance and value ascribed to it by UK-PHRST.

7. In addition, from our more recent partner surveys we confirm a desire that on the part of our partners that:

8. UK-PHRST engages with its partners more frequently in the course of a year – not just in large one-off events such as the Cape Town event, but in smaller, perhaps more team-focussed activities. This means we should as a routine invite partners to all learning session. This approach is already underway in Year 8.

9. UK-PHRST should continue to raise awareness among its staff about potential levels of dissatisfaction that partners may feel and the importance of not positive feedback for granted.

10. UK-PHRST should offer its staff opportunities to build not just their technical skills, but the soft skills that require greater levels of active listening, communication, humility and an openness to learning; as well as being clear on how to prevent and address challenging situations arising in our partnerships.

11. UK-PHRST has completed a management response to each of the recommendations generated at the Cape Town Learning event. This response is to be sent to all partners at the event and will be included in the learning publication referenced above.

Annex: Y7 Theory of Change

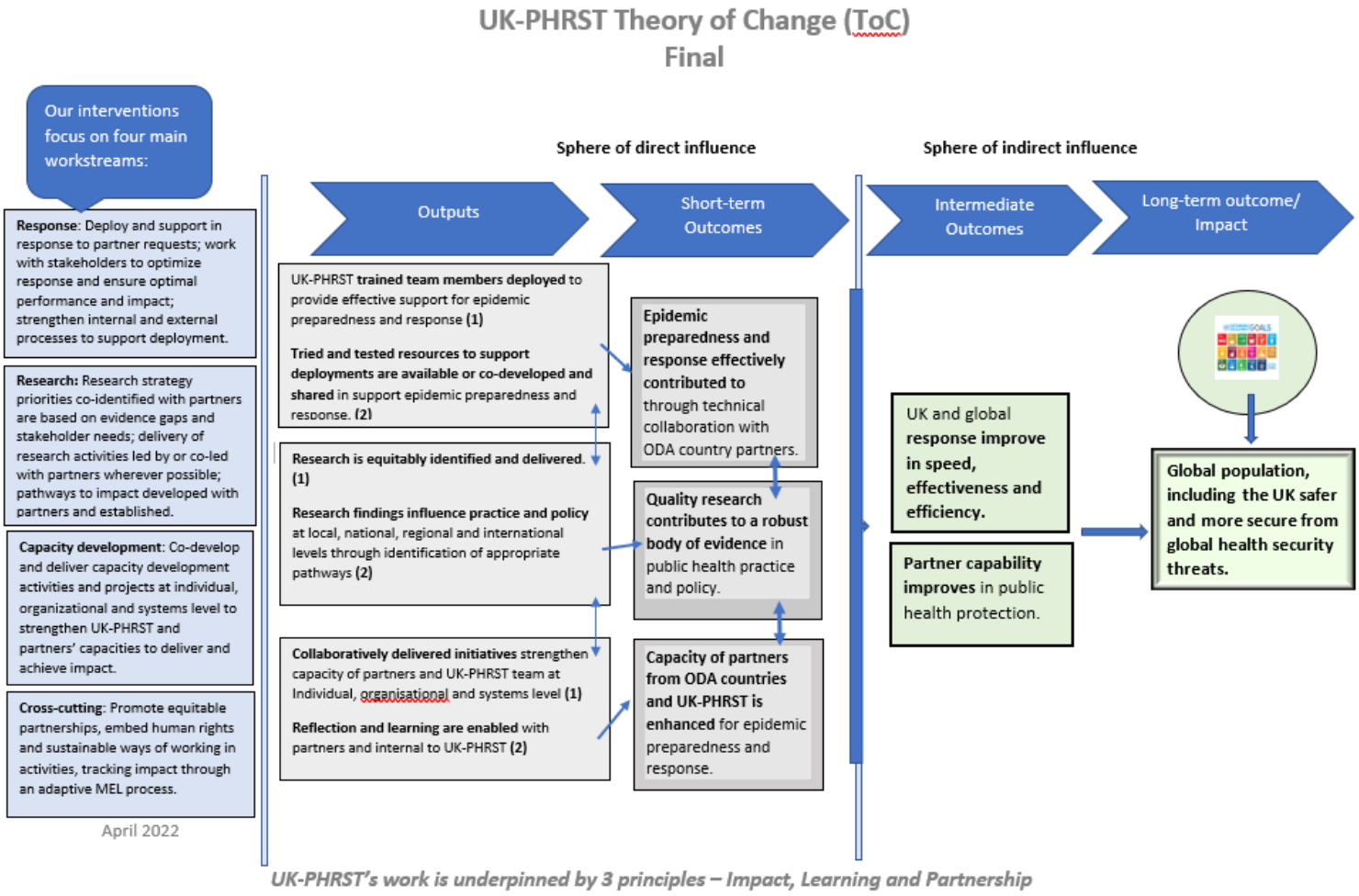

Figure 1 - The UK-PHRST Theory of Change (ToC) captures the underpinning principles of its work - impact, learning and partnership. The 4 main focuses of the project's work are response, research, capacity development and cross-cutting activities. The ToC demonstrates how these contribute to the intended outputs and outcomes it sets out to achieve, as well as the intended spheres of influence activities will have impact on. The long-term outcome/ impact of the UK-PHRST is the global population, including the UK, is safer and more secure from global health security threats.

www.gov.uk/dhsc