



Achieving universal health coverage in LMICs: The role of quality of care research

Workshop report

29–30 May 2019
London



This workshop is funded by the Global Challenges Research Fund that aims to support cutting-edge research that addresses the challenges faced by developing countries.



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Executive summary

The global commitment towards achieving universal health coverage (UHC) has been affirmed as part of the Sustainable Development Goals (SDGs). UHC means that all individuals and communities should have access to the full spectrum of essential and high-quality health systems that optimise healthcare in each given context by consistently delivering care that improves or maintains health, by being valued and trusted by all people, and by responding to changing population needs.

Ideally, the full spectrum of access should include promotion, prevention, treatment, rehabilitation and palliative care without financial hardship, although typically countries are limited in what they are able to provide.

At the Academy's workshop, participants reflected on progress made towards achieving quality UHC and considered the role that research can play in improving the quality of care provided in low- and middle-income countries (LMICs). In addition, the workshop provided a platform for participants to share knowledge of what hasn't worked in their countries and of promising approaches that appear to strengthen quality of care in specific initiatives.

Barriers and challenges to achieving high-quality UHC

- Workshop participants identified several barriers and challenges to achieving high-quality UHC across the different regions of the world:
- The discourse on UHC has focused on financial aspects and coverage as opposed to quality of care. There remain significant gaps in countries' health systems and population data and what data are available may be of poor quality, while capacity to address these challenges and make effective use of data to improve quality is often lacking.
- Funding for research into improving the quality of healthcare can be difficult to leverage, especially when there is a lack of trained researchers, a lack of institutional support, and fragmentation due to several different healthcare sub-systems. In addition, funders often have different priorities to what is required on the ground.
- Policy may be poorly developed to promote quality within UHC and poorly implemented due to problems with governance of quality, or wider institutional challenges, including corruption.
- There are multiple interdependent issues including management, leadership and organisational culture affecting delivery of quality care at the frontline. In addition, challenges around building a quality culture (including through training) amongst frontline workers, and how technologies might enhance or challenge the provision of quality care were mentioned.
- A range of social, geographical and political factors also present challenges. These include patients feeling disempowered and not knowing their rights; having a range of LMICs within a region, such as in the Americas, resulting in a range of different needs and priorities and variation in quality of care; and finally, fast-changing political landscapes in addition to changing economies and epidemics.

Success stories

Although challenges were identified across the groups, the participants were also able to highlight several examples of successes in their regions:

- Africa has many examples of research that inform quality of care interventions. In Kenya, network strategies to promote learning and improvement through better collective use of data are being used to standardise some elements of hospital care as part of advancing quality. In Ghana, health research to strengthen the health system is being embedded in the health ministry.
- In Asia, health technology assessments are being used in the Philippines, India, Malaysia, China and Thailand to support the selection of the best interventions in UHC. Other examples include Sri Lanka, Bangladesh and Pakistan where outbreaks had encouraged the development of management guidelines to reduce mortality. India is a further example, where participatory learning action has reduced neonatal and maternal mortality. The Thailand Healthcare Accreditation Institute plays a significant role in quality improvement and promotes a strong movement towards safety culture, and large-scale voluntary adverse event reporting serves as a platform for risk management, quality improvement and strong engagement by professionals.
- The Americas have had success with vaccination programmes which have been found to be a good way to invest money and obtain results, but identified that these need to be sustainable. Participants from Ecuador spoke of a project which trialled oxytocin treatment for post-partum haemorrhage in a single province, which was consequently scaled up to a national level, resulting in a drop in mortality rates

Commonalities

Commonalities were identified across the nations represented at the workshop:

- Participants from the African region found that quality of care research was fragmented, poorly funded and externally driven. It is thought that this is due to several reasons. Firstly, research is seen as an academic effort and is not embedded in policy and systems, which limits cumulative learning. Furthermore, a common misconception is that improved quality of care is the result of new infrastructure, technology and facilities, which drives resource allocation at the expense of attention to 'softer' aspects of quality of care including patient/health worker interactions. Additionally, quality of care research is poorly understood and valued by policymakers, bureaucrats and among clinicians, meaning it consistently lacks prioritisation.
- Participants from Asia reported insufficient health systems research, and quality of care not being prioritised, as well as a lack of human resource capacity, and limited funding to support research.

Research priorities

Workshop participants identified some key research priorities that they felt needed to be considered for implementation of quality of care into UHC:

- Research is needed on providers' and users' perspectives on barriers to quality of care. Actions are also required to enhance community and patient engagement towards strengthening accountability and governance arrangements.
- Digital technologies need to be harnessed together with the required training of personnel, to implement and monitor highquality UHC.
- Human resources are critical, and the development of soft skills in the workforce, as well as the welfare, motivation and close supervision of frontline health workers must be explored.

- Organisational and leadership cultures need to be addressed to improve the safety and quality of care, and a culture of openness and support.
- The regional groups also identified some research priorities specifically for their region, including determinations of cost effectiveness of quality improvement and social accountability in Africa, and the use of case studies of best practice and adaptation of health financing models in all regions. Although these priorities were identified as less important for the Americas, it was agreed that the quality of primary healthcare in this region should be considered.

Participants also highlighted issues around quality of care research approaches and methodologies:

- Where countries have the capacity, countries themselves should set the agenda. However, external funders could also support and even lead research. Importantly, this support must be more egalitarian in nature, with a clear plan to develop national long-term capacities. Where countries already have capacity then external funders may provide support when their specific strengths and expertise will enhance the internal capacity.
- Embedding quality research in healthcare settings with the full engagement of clinicians and allied professionals contributes significantly to evidence of quality improvement, whilst strengthening the culture for quality and safety. Quality research should be an integral part of clinical services.
- It was felt that it is essential that all countries develop some common measures regarding quality with the agendas set by the individual countries. As countries differ in their starting points, in terms of both quality of care and UHC capacity, lessons can be learned across countries. This is a priority area for the World Health Organization (WHO).

Collaborations

The workshop delegates discussed opportunities for further collaboration:

- Cross-country collaborations should be established, which should inform current confirmed issues and challenges; in response to this, policymakers should be involved from the beginning, to review results and take actions. The professional community should fully engage in the research; and embed research into clinical practice. North-South-South collaboration can be one key entry point.
- It was agreed that sharing of resources was important between member countries, regions, and research institutes, and that partnerships can aid agenda development and learning.
- Academic networks can also be utilised at a regional and global level, and professional associations can help with advocacy and skills development.
- Collaborating with universities and learning institutions was also seen as an important method in ensuring that quality of care is included within training curricula.
- There needs to be capacity building for new methodologies and expertise amongst producers, end-users, and other beneficiaries of research; this could be facilitated by convening stakeholders. This will demand changes to the traditional university research environment.
- Creating a network of mentors, skills and knowledge that can be transferred across generations of researchers was also considered important.

Conclusions and next steps

In conclusion, the workshop identified several barriers and challenges to undertaking quality of care research related to UHC in LMICs. Issues included poor understanding of quality of care research and its value, leading to low demand and prioritisation of this form of research relative to research on financial aspects of UHC; challenges around the effective generation and use of data; fragmented healthcare sub-systems; and challenges in carrying out research to address issues related to management, leadership, organisational culture, and the quality culture of frontline workers. However, participants were able to highlight examples of success stories from many small-scale studies of the impact of quality of care research, including the improvement of public-private partnerships in Africa, the use of health technology assessments in Asia, and vaccination programmes in the Americas, although few were able to recall examples of improvements across different levels of the healthcare system. Delegates also identified commonalities in the challenges faced across the LMICs represented, with insufficient health systems research highlighted as a key issue. For example, in Asian countries (China, the Philippines, Thailand and Vietnam) this insufficiency was due to a lack of policy demand, together with cultures that do not use evidence to inform policy decisions, and a variety of resource constraints (i.e. a prioritised research agenda, funding, researchers, skills retention and incentive), ultimately leading to gaps in research uptake and limited health systems research.



Introduction

The World Health Organization (WHO) estimates that at least half of the world's population still lack full coverage of essential health services.¹ The global commitment towards achieving universal health coverage (UHC) has been affirmed as part of the Sustainable Development Goals (SDGs). UHC means that all individuals and communities should have access to the full spectrum of essential and effective health services including promotion, prevention, treatment, rehabilitation and palliative care without financial hardship, although in reality countries are limited in what they are able to provide.

About 100 million people are pushed into extreme poverty by having to pay for healthcare.² A multitude of barriers and challenges exist which prevent the achievement of UHC; many of these barriers are country- or region-specific. Some challenges are shared however, and global support can help accelerate the attainment of UHC through global and regional level research, information gathering, financial investment and technical assistance. Establishing UHC depends on many governmental departments and aspects including improving infrastructure, training and expanding the healthcare workforce, employing strategies that create the appropriate strategic mix of hospitals, primary healthcare (PHC) facilities and community-based care, developing information systems, and ensuring the supply of medicines and medical technologies.³

Many countries are making progress towards achieving UHC, with most low- and middle- income countries (LMICs) being in the process of designing and implementing strategies to ensure their whole population has access to essential health services, which must be of high quality. Yet current data suggest that in many LMICs, the quality of care provided is sub-optimal. Quality of care is defined by the degree to which health services for individuals and populations increase the likelihood of desired health outcomes, are person-centred and are in line with current health research knowledge. An opportunity exists for quality of care to be built into the foundation of UHC and into policies, processes and institutions as health systems are developed and services scaled up. Ensuring that the preventive and curative care being provided is of high quality, safeguards patient safety, and is responsive to the specific needs and life circumstances of patients will be essential to creating trust in the health system and will require engagement with communities and patients.

Poor quality care not only carries a high cost in terms of lives lost and reduced quality of life, but it also carries a high financial cost as it wastes precious resources which could be invested into other important drivers of socioeconomic development.⁴ Achieving high-quality UHC will also help countries to make progress towards the other SDGs as healthier people and children are able to work, learn and be more productive. Poor quality care often disproportionately affects vulnerable groups including the poor, people with conditions that are stigmatised and people who are less educated.⁵ UHC is an important step towards social inclusion and equity; access to quality healthcare is a right, not a privilege. It is also important to acknowledge the need for quality social care as part of building inclusive societies and improving quality of care more generally.

1. The World Health Organization (2018). *Universal health coverage fact sheet*. [https://www.who.int/news-room/fact-sheets/detail/universal-health-coverage-\(uhc\)](https://www.who.int/news-room/fact-sheets/detail/universal-health-coverage-(uhc))
2. The World Health Organization (2018). *Universal health coverage fact sheet*. [https://www.who.int/news-room/fact-sheets/detail/universal-health-coverage-\(uhc\)](https://www.who.int/news-room/fact-sheets/detail/universal-health-coverage-(uhc))
3. Academy of Medical Sciences (2016). *Improving the health of the public by 2040*. <https://acmedsci.ac.uk/file-download/41399-5807581429f81.pdf>
4. National Academies of Sciences, Engineering, and Medicine (2018). *Crossing the Global Quality Chasm: Improving Health Care Worldwide*. <https://doi.org/10.17226/25152>
5. Kruk ME, et al. (2018). *High-quality health systems in the Sustainable Development Goals era: time for a revolution*. *Lancet Global Health* **6**, e1196–252.

Many barriers exist which prevent healthcare workers, providers and policymakers from offering high-quality healthcare. Research and evaluation are essential parts of achieving quality UHC by determining the opportunities and challenges, and assessing progress. Further research, including policy and implementation research, is necessary to understand these barriers better and drive innovation to develop new approaches to transform low-quality health systems into high-quality systems. A global platform can help in sharing knowledge to ensure that innovations can be adapted to local population and community needs. It is essential to continuously evaluate the effects and costs of these innovations and new approaches aimed at improving health and the patient experience. Furthermore, measuring and evaluating progress provides valuable insight for policymakers and is essential to improvement. Quality of care can be measured by seven elements of quality; effectiveness, safety, timeliness, equity, person-centeredness, care integration and efficiency.⁶

The main objective of this workshop was to establish the progress made towards achieving quality UHC and consider the role that research can play in improving the quality of care provided in LMICs. In addition, the workshop provided a platform for participants to share country knowledge of what hasn't worked and of successful approaches which have led to an increase in quality of care. To achieve this, our aims were as follows:

- To bring together experience and evidence from case studies from across all regions of the world on what progress has been made towards achieving quality UHC, especially in LMICs.
- To identify country-/region-specific and shared barriers and challenges to employing research in the service of achieving quality UHC.
- To provide a platform for different regions/countries to share their research experiences, challenges and successes to allow countries to learn from one another.
- To agree on a list of research priorities and solutions to overcome the identified barriers which can be addressed at a global, country or regional level.

The meeting, held at the Academy of Medical Sciences, London, UK, was organised by a workshop steering committee (Appendix 1). This report is intended to provide a summary of the themes that emerged during the discussions. It reflects the views expressed by participants at the meeting and does not necessarily represent the views of all participants, all members of the steering committee or the Academy of Medical Sciences.

6. World Bank Group. Kieny MP, et al. (2018). *Delivering quality health services: a global imperative for universal health coverage*. <http://documents.worldbank.org/curated/en/482771530290792652/Delivering-quality-health-services-a-global-imperative-for-universal-health-coverage>

Barriers and challenges to achieving high-quality UHC

Perceptions and priorities

Participants felt that there are misconceptions about UHC, that it is seen as purely a healthcare financing challenge, and therefore the focus has been on costs, benefit packages, budget impacts and the extension of service coverage rather than on ensuring that services provided are of good quality.

While attention has been paid to increasing access to healthcare, the trade-off is that there is less investment in quality. With such a focus on financing, quality of care can be neglected. While programmes such as the International Society for Quality in Health Care (ISQua) exist, these could be enhanced by a more specific focus on LMICs so that they could learn from experiences in creating and maintaining research communities. For example, the Multilateral Initiative on Malaria Pan African Malaria Conference launched 'a movement', bringing together scattered communities to start a new initiative. Similarly, WHO and UNICEF have launched initiatives to promote quality of care in areas such as maternal, newborn, child and adolescent health.⁷

Data

While there may be data available, its quality and how it is used to inform decisions is a challenge. The participants felt that by creating better data and using the data available more effectively, quality could be improved.

Funding

Participants felt that funding for quality of care research, and more broadly for health policy and systems research, can be difficult to leverage, and this was highlighted in the Americas where there are so many different sub-systems of the health service, which make it a challenge as so many parties are struggling for funding. Fragmented systems cause a challenge for research, as does the difficulty in taking context into account. There are also issues where international funders have focused on areas that they are interested in rather than where there is a real necessity for funding. It was felt that there was a lack of prioritisation towards quality of care research, which creates a lack of impetus to raise funds and recruit people.

Quality of care – research on governance

It was felt by some participants that there were inconsistencies in policies with governance issues ranging from misunderstanding to corruption. There may be quality assurance or improvement departments in government, local administrations or facilities, but they often fail to implement or advance policies. This may be because they are not directly funded or are subsidiary programmes to disease-focused strategies, as reported by participants from the African region, leading to large gaps in policies. In addition, participants from the Americas reported that they do not see policies being supported by evidence. There were discussions about whether the research agenda should be embedded within government systems or local academic institutions, or international NGOs in LMICs. The experiences shared highlighted the fact that all these options had risks and benefits, but all participants recognised that research needs to be conducted in partnerships across these groups.

7. World Health Organization (2016). *Standards for improving quality of maternal and newborn care in health facilities*. https://www.who.int/maternal_child_adolescent/documents/improving-maternal-newborn-care-quality/en/

Therefore, pragmatic steps need to be in place to deliver expected evidence, to ensure this is used by the country and to ensure that funds are accounted for.

Skills

Participants noted that there are issues around management, leadership, organisational culture, and the quality culture of frontline workers, which create barriers to high-quality care. There are particular weaknesses in the quality of care training content in pre-service curricula for all health workers, whether clinical or administrative, and it was felt that these employees did not know the expectations of clients and were not oriented towards quality of care.

Participants from the Americas noted that they are seeing an ageing workforce with potential recruits not being encouraged to enter the healthcare workforce. There are also concerns around getting older workers to adapt to new technologies and ways of working.

Social, geographical and political factors

It was felt that patients are frequently disempowered and do not know their legal rights to quality healthcare. If patients knew what they were entitled to, or what they could expect in terms of the quality of healthcare received, this could help improve services. Therefore, national governments should take accountability for improved patient understanding, but should take care to avoid a 'them and us' situation between patients and providers. Participants from the Americas noted particular geographical challenges, due to being made up of both LMICs and MICs, meaning there are different needs and priorities. There is also great variability in the quality of care, as well as inequity when it comes to access. This inequity is in part due to geography but also partly due to cultural views surrounding healthcare. While there is an increased awareness of people's rights to quality healthcare, this is yet to be translated into mechanisms to allow these rights to be claimed.

It was also noted by participants from the Americas that their landscape is constantly evolving with fast political changes as well as changes in the economy and epidemics. Interests are vested, and while health is spoken about by every authority, it is not being made a priority.

Success stories

Africa

Africa has many examples of research informing quality of care interventions. Tanzania reported success with public-private partnerships linked to expanded access to hospital care, which has helped with waiting times. Kenya is linking continuous quality monitoring to improvement activities in order to standardise paediatric and newborn care in hospitals.⁸ Ghana has embedded health research capacity within the Ministry of Health, which potentially enables quality of care research and the rapid translation of findings into practice. They have a community health worker programme that was informed by research, and which they believe is improving the quality of health services available to underserved population groups. Egypt has been improving the skills of family planning providers, which is increasing utilisation and satisfaction, and has reduced discontinuation of family planning services and contraception.⁹

Asia

India, the Philippines, Malaysia, China and Thailand are using health technology assessments (HTAs) to support the selection of the best interventions in UHC.¹⁰ Sri Lanka, Bangladesh and Pakistan discussed how dengue outbreaks were the driving factor in helping them develop management guidelines that led to a reduction in mortality.¹¹ In India, participatory learning action has led to a reduction in neonatal and maternal mortality.¹² Malaysia has introduced a laboratory accreditation scheme that is helping to improve quality of care.¹³ The Philippines have developed Commissioning Priorities Group (CPG) guidelines after a Department of Health commissioned study. In Thailand, a stakeholders platform has been developed to evaluate and monitor UHC quality of care indicators.¹⁴

8. Irimu, et al. (2018). *Approaching Quality Improvement at Scale: A Learning Health System Approach in Kenya*. Archives of Disease in Childhood **103** (11), 1013-1019.
9. Letaief, et al. (2008). *Implementing a quality improvement programme in a family planning centre in Monastir, Tunisia*. East Mediterranean Health Journal. **14** (3), 615-27.
10. Marsh, et al. (2018). *Incorporating MCDA into HTA: Challenges and potential solutions, with a focus on lower income settings*. Cost Effective Resource Allocation. **16** (S1), 43.
11. Kalayanarooj, et al. (2017). *Case management of dengue: Lessons learned*. Journal of Infectious Diseases. **215** (S2), S79-S88.
12. Tripathy, et al. (2010). *Effect of a participatory intervention with women's groups on birth outcomes and maternal depression in Jharkhand and Orissa, India: a cluster-randomised controlled trial*. Lancet **375** (9721), 1182-1192.
13. Tarantino, et al. (2016). *Malaysia: Governing for Quality Improvement in the Context of UHC*. https://www.usaidassist.org/sites/default/files/malaysia_country_case_study_06-09-2016.pdf
14. World Health Organization (2017). *Patient Safety Making health care safer*. <https://apps.who.int/iris/bitstream/handle/10665/255507/WHO-HIS-SDS-2017.11-eng.pdf>

The Americas

In the Americas, vaccination programmes have been found to be a good way to invest money and obtain results. However, success stories need to be sustainable for vaccinations as take-up rates can drop. Ecuador reported the use of oxytocin in post-partum haemorrhage, and after trialling it in one province, it was scaled up to become part of the national programme, which resulted in a reduction in maternal mortality. In Peru, networks of clinics in remote rural indigenous communities have linked together to provide comprehensive healthcare to the Andes by taking into account what the population needed. By working together, they have been able to make their work sustainable, which has attracted the attention of the authorities and has led to the widespread use of information and communication technologies – or ‘e-health’ – in healthcare. In Argentina, provider payment mechanisms have changed for normal deliveries and C-sections. Brazil had a national research project regarding quality of care, which aimed to inform policymakers at all levels of what is happening and ensure the expansion of the primary healthcare system. Supplementary Medical Insurance (SMI) reported that a results-based financing programme, including eight countries in the Americas, has helped them to increase coverage quality.

Commonalities

African participants found that quality of care research was fragmented, poorly funded and externally driven. Research is seen as an academic effort and is not embedded into policy and systems, which therefore limits longer-term capacity building and cumulative learning. While there are a lot of client satisfaction surveys, very little is done on client expectations. It was also felt that while health data may be collected and available, often it is poor quality and the systems for improving it are weak. Furthermore, institutional capacity to use data for health systems monitoring and evaluation purposes is very limited, particularly when evaluating the impacts of changes for strategic planning purposes.

Asian participants reported that there was insufficient health systems research and quality of care was not being prioritised. There is also a lack of human resource capacity and limited funding to support quality of care research. This lack of research then results in there being no impetus to mobilise funds and recruit researchers.

Research priorities

Despite the expanding literature on the topic of quality of care, providers' and users' perspectives on barriers to quality of care are needed. Research is required to understand what mechanisms can promote patient and community engagement with health services. Additionally, research is required to investigate ways of improving the quality of care using the current resources and capacity available in LMICs, and how best to spread the learning and skills so that the global community advances the agenda.

Digital technologies need to be harnessed to implement and monitor high-quality UHC, and to aid research development. For example, mobile e-Surve technology has helped to revolutionise polio disease surveillance, and end the recent polio outbreak in Nigeria, whilst strengthening the disease surveillance system and building the research capacity of Local Government Area (LGA) Disease Surveillance and Notification Officers.¹⁵ However, it was felt that research is needed into the use of and appropriateness of using digital technology in healthcare as this can cause delays in some countries and is therefore seen as a barrier to accessing healthcare. For example, there are many issues that technology may not address, which is often overlooked in the enthusiasm for what is seen as 'simple' digital fixes.

Human resources are a critical consideration, particularly given the severe lack of trained personnel in LMICs currently and the fact that in many countries there is an ageing health workforce. This ageing workforce also needs to be addressed in terms of how these people are managed; for example, older health workers are less likely to be using technology.

Work also needs to be done on the welfare and motivation of the frontline workforce, so looking at research models across the regions in order to create a motivated workforce can help improve quality of care. New approaches to improve the availability, skillset, retention and capacity of human resources are needed to deliver quality care. Working with incentives must be explored as well as ways to improve soft skills at the frontline, such as important relational management and leadership skills. Changes in behaviour also need to be analysed as healthcare should keep up with the rapidly evolving needs of society.

The organisational and leadership culture needs to be addressed to improve quality and safety of care, although it is felt that there isn't currently a quality of care culture amongst practitioners. There needs to be a culture of support for quality of care that is created through education; how to do this best can be informed through further research. Additionally, hierarchies will need to be flattened and interpersonal skills developed to encourage critical assessments of quality of care and confidence amongst staff that they can highlight quality and safety concerns to identify problems early, without risk of consequences. Effective governance and management processes need to be developed as these aren't normally taught within professional education.

Participants from African regions addressed the cost of poor quality and inaction and suggested that there would be value in determining the cost-effectiveness and long-term benefits of quality improvement. Also discussed was social accountability in terms of demand, and how priorities for quality of care research should be set across patients, the metrics and processes for quality measurement and improvement, and the processes required to ensure that quality of care research is conducted effectively from study design through to patient impact. The impact of alternative payment systems on quality of care also needs to be addressed.

Participants from multiple regions noted using case studies of best practices in quality of care in LMICs to provide transferable learning by carefully illustrating what is working and how people can draw on these as they consider their own context. Health financing models need to be adapted, and in each country context necessitates a highly localised perspective rather than a transplanted model.

Participants from the Americas didn't identify any common research priorities, however they agreed that they should consider the quality of primary healthcare, and what strategy is required to reach this. Research is also essential regarding non-communicable diseases.

Research approaches and methodologies

A particular barrier is that a lot of the research is externally funded, and if funding was instead within the system, and aligned with national mandates, then this could have a significant impact on defining the agenda. External finance could then be brought in to support this. This was an approach taken by Ghana who started with an internal unit in the Ministry of Health (MoH) to catalyse setting and acting on local priorities, rather than relying on external funders. By having internal MoH research systems, policy results can be implemented quicker, as has been done in Thailand.

Stakeholders and organisations as well as other avenues for dissemination need to be identified. The approach needs to be focused on implementation and be multidisciplinary, drawing on expertise or methods from other fields which are specific to the country care context. Processes are just as important as the outcomes and structures. Therefore, the research methods and the externalities which accompany them – such as institutional capacity strengthening – are also important. Drawing on the expertise of multiple stakeholders throughout will also help to maximise the longer-term benefits of research.

Participants felt it was essential that all countries develop some common measures regarding quality, with the agendas set by the individual countries. With countries differing in their starting points in terms of quality of care and UHC capacity, lessons can be learned across countries. For example, in an effort to cut preventable maternal and newborn illness and death, the WHO has led the way in this area by launching a Network for Improving Quality of Care for Maternal, Newborn and Child Health. Members of this network meet regularly to discuss important issues such as accountability and learning for quality.¹⁶ There is also the issue of access to new data and sources, and all this new information needs to be managed. Given the wide variety of complex methodologies for research, conducting high-quality research requires carefully developed skills. This is an area where international collaborations can help, as it is important to learn and take into account new ways of thinking when doing research. Frontline workers and decision makers need to be engaged to help facilitate researchers to get closer to the people they work with.

15. World Health Organization. *How e-Surveillance strengthens health systems in Nigeria*. <https://www.afro.who.int/news/how-e-surveillance-strengthens-health-systems-nigeria>

16. World Health Organization (2019). *Maternal, newborn, child and adolescent health*. https://www.who.int/maternal_child_adolescent/topics/quality-of-care/ethiopia-network/en/

Collaborations

It was agreed that the sharing of resources was important amongst member countries, regions, and research institutes, and how these partnerships and developments can aid agenda development and learning. Academic networks can also be utilised at a regional and global level, and their professional associations can help with advocacy and skills development.

Sharing work between LMICs, such as through an open repository for grey literature, will allow countries to learn from both successes and failures. Collaborating with universities and learning institutions was also seen as an important method in ensuring quality of care is included within the curriculum. Countries such as Thailand and Ghana, where the expertise is built up outside the universities, find it difficult to get research culture into universities; therefore a more supportive relationship needs to be formed between academia and health services.

There needs to be capacity building on new methodologies and expertise among producers, end-users, and other beneficiaries of research, which could be facilitated by convening stakeholders. Physicians working at all levels of care are often also working as managers, a role they have not been properly trained for. It is therefore imperative that they have managerial as well as clinical acumen, however these leadership skills aren't often included in the curriculum in LMICs, even at postgraduate level.

The ageing population of health workers could be a valuable resource for mentorship programmes for researchers. By creating a network of mentors, skills and knowledge can be transferred to the younger generation.

Conclusions and next steps

In conclusion, the workshop identified several barriers and challenges to implementing quality of care research into UHC in LMICs. Issues included low prioritisation of quality of care against financial aspects; challenges around the effective use of data; fragmented healthcare sub-systems; management, leadership, and organisational culture; and the quality and culture of frontline workers. However, participants were able to highlight many examples of success stories of quality of care interventions including improvement of public-private partnerships in Africa, the use of health technology assessments in Asia and vaccination programmes in the Americas. Delegates were also able to identify commonalities in the challenges faced across the LMICs represented, with insufficient health systems research highlighted as a key issue.

Based on their discussions, the workshop participants identified key research priorities:

- Providers' and users' perspectives on barriers to quality of care.
- How best to build on current resources and capacity to enhance the quality of care.
- Digital technologies and their adoption for implementation of high-quality UHC.
- Human resources, including development of soft skills and the welfare of frontline workforces.
- Addressing organisational and leadership cultures as well as creating a support culture through education.

Participants also highlighted issues around research approaches and methodologies that need to be addressed including:

- Stronger links between national institutions, university departments and policymakers.
- The identification of stakeholders and organisations for dissemination.
- New methodologies for the assessment of public experiences of care.
- The development of common measures for quality.
- The management of access to new data and sources.

Workshop delegates also discussed opportunities for collaboration including:

- The sharing of resources to aid development and learning.
- The development of academic networks at regional and global levels to help with advocacy and skills development.
- The creation of an open repository for grey literature for LMICs to learn from each other's successes and failures.
- Working with universities and learning institutions on including quality of care in curricula.
- Establishing mentorship networks to transfer skills and knowledge across generations, both in terms of medical research and practice.

Advocacy, including validation of the outcomes and priorities of the meeting, as well as cross-country learning, was seen as the first step. It was suggested that continuous monitoring of activities could include side panels or informal gatherings at international forum meetings on quality of care. It was agreed that, regardless of position, all delegates could implement some form of advocacy, whether it was bringing together the academy network, encouraging their own academy to take this on as a topic, or simply sending the report to colleagues. It was also recommended that the Academy uses its position to put out a statement to other academies as a call to action on why quality of care research has been so neglected.

In the short term, participants noted that mapping the research and policy architecture for quality of care improvement could be done at a country level, and this would include institutions, structures and processes.

Many participants felt that research into digital solutions should be carried out, looking at areas such as e-health and telemedicine. A review of existing or piloted digital solutions should also be conducted in the short term, building on extensive research on these issues in high-income countries.

Participants also felt that research on the cost of poor quality care as well as the cost effectiveness of interventions to improve quality, should be reviewed in the short term. This would involve looking at the number of deaths as well as at drugs that are being prescribed unnecessarily, and building an economic case for investments in quality (as was done in high-income settings where the scale and costs of adverse events from care have become major concerns).

In the longer term, participants felt that curating a reader on methods for quality of care research would be possible within one to three years, as it was felt that the one produced by the Alliance for the HSPR community on human resources for health, for example, had been particularly valuable. Participants also agreed that governance and accountability for quality of care should be strengthened throughout the system. This could cover both local governance, as well as national, and can include the improvement of the procurement system.

Action could also be taken on the research and policy mapping work completed in the short term to ensure that quality of care is included in the research agenda.

Participants felt that the key ways to ensure countries can work together were firstly through the building of networks and partnerships to enable cross-country sharing. Capacity building should also be a focus, particularly with mentoring. Platforms for evidence and data sharing could also be beneficial in allowing countries to share and learn from each other's experiences.

Appendix 1: Workshop steering committee

Co-chairs

- Professor Dame Anne Mills FMedSci, London School of Hygiene and Tropical Medicine, UK
- Dr Carmencita Padilla, University of the Philippines, Philippines

Committee

- Professor Mike English FMedSci, KEMRI-Wellcome Trust Research Programme, Kenya
- Dr Karina Kielmann, Queen Margaret University, UK
- Professor Chima Ariel Onoka, University of Nigeria, Nigeria
- Dr Diana Pinto, Interamerican Development Bank, USA
- Dr Viroj Tangcharoensathien, International Health Policy Program, Thailand

Appendix 2: Participant list

Name	Organisation
Dr Irene Akua Agyepong	Ghana College of Physicians and Surgeons
Professor Syed Masud Ahmed	BRAC University, Bangladesh
Dr Mary Efram Ashinyo	Ghana Health Service Headquarters, Ghana
Dr Felix K Assah	University of Yaoundé, Cameroon
Dr Muhammad Zaman Khan Assir	University of Health Sciences Lahore, Pakistan
Marcus Bage	The Academy of Medical Sciences
Dr Suraj Bhattarai	Global Institute for Interdisciplinary Studies, Nepal
Dr Abigail Bloy	The Academy of Medical Sciences
Professor Kalipso Chalkidou	King's College London, UK
Dr Lesong Conteh	Imperial College London, UK
Dr Shuvra Dasgupta	University Hospital of the West Indies, Jamaica
Professor Vajira H W Dissanayake	University of Colombo, Sri Lanka
Dr Suranga Dolamulla	University of York, UK and Ministry of Health, Nutrition and Indigenous Medicine, Sri Lanka
Dr Rolando Enrique Doming	Department of Health, Philippines
Dr Osahon Enabulele	Commonwealth Medical Association, Nigeria
Professor Mike English	University of Oxford, UK and KEMRI-Wellcome Trust Research Programme, Kenya
Dr Christopher Exeter	Department for International Trade, UK
Dr Rocco Friebel	London School of Economics and Political Science, UK
Dr Abdul Ghaffar	World Health Organization
Mr Octavio Gómez-Dantés	National Institute of Public Health, Mexico
Dr Damitha Asanga Gunawardane	Ministry of Health, Sri Lanka
Dr Jorge Hermida	University Research Co., LLC
Professor Karen Hofman	SAMRC/Wits Centre for Health Economics and Decision Science, PRICELESS SA and University of Witwatersrand, South Africa
Alex Hulme	The Academy of Medical Sciences
Professor Dame Anne Johnson	The Academy of Medical Sciences and University College London, UK
Dr Karina Kielmann	Queen Margaret University, UK
Dr Jian Li	CAMS & PUMC, China
Datuk Professor Dr Lai-Meng Looi	University of Malaya, Malaysia
Professor Daniel Maceira	University of Buenos Aires and CEDES and CONICET and Health Systems Global

Appendix 2: Participant list

Name	Organisation
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Professor Christopher Millett	Imperial College London, UK
Professor Dame Anne Mills	London School of Hygiene and Tropical Medicine, UK
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