



TACKLING ANTIMICROBIAL RESISTANCE VIA COMMUNITY ENGAGEMENT APPROACHES

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Photo credit: Nichola Jones



SCOPE

In June 2019 HERD International and the University of Leeds hosted an interdisciplinary workshop on the scope of community engagement, including participatory and creative approaches, to address One Health issues, specifically antimicrobial resistance (AMR) in low and middle income countries (LMICs). This marked the beginning of the CE4AMR network (community engagement for antimicrobial resistance) and included short lightning talks from most delegates, but centred on interactive activities and group discussions rather than lengthy presentations. Based in the Kathmandu Valley, Nepal CE4AMR brought together a wide range of participants from policy, practice, research and industry backgrounds. This made for diverse and sometimes challenging discussions around how to tackle AMR in LMICs through integrating community, and broader Arts and Humanities methods. This document highlights some of the main areas of learning from the event.

Box 1: What is Antimicrobial resistance?

The issue of antimicrobial resistance or AMR refers to the process by which microbes (including bacteria) change in order to survive the drugs designed to destroy them. This means the antimicrobial medicines used in agriculture, human and veterinary health care are losing their effectiveness thus common infections are becoming more difficult to treat and could become life-threatening. Although natural, AMR is being exacerbated by the misuse, overuse and improper disposal of antimicrobials across sectors, and The World Bank have made it clear that the threat of AMR is extremely serious. If no progress is made on AMR this decade it will account for over 300 million human deaths by 2050 and push 28million people into poverty, most within low or middle income counties. Food shortages will occur due to AMR destabilising agricultural and farming yields, and in combination these effects are likely to cost the global economy in excess of 1 trillion US dollars, equivalent to the 2008 financial crash.

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Kathmandu Nepal

Antimicrobial Resistance: Global
Prospects in One Health
Approach

Community Engagement, and
Humanities




BACKGROUND

From 2015-17 a number of reports have offered stark predictions on the global threat of antimicrobial resistance or AMR (see Box 1) particularly for low middle income countries whose weaker health systems and economies are set to bear the brunt of AMR-related deaths. Following these publications there has been serious engagement with AMR through the development of policy documents, AMR education across health systems, and increased spending on research and development to find new and alternative antimicrobial drugs. However, AMR is also a social problem. At community level people need to understand how antimicrobial drugs work, when and how to use them, and how to dispose of them. Unfortunately engaging with health professionals alone may not fully address this issue. This is particularly so in low and middle income countries where antimicrobials can simply be bought over the counter with no diagnosis, thus no appropriate matching of medication to disease, and little support for usage and disposal. This problem occurs for human, animal and agricultural antimicrobials which may be used interchangeably across sectors, stored beyond their use-by dates and disposed of incorrectly, such as into open water sources where they can then contaminate the environment. Such challenges around public antimicrobial usage also differ between communities and thus require a localised approach to find solutions which are meaningful and achievable within their given context.

It is this localised aspect of AMR which makes it particularly difficult to address through blanket policy-making and top-down systemic changes. However, there is an alternative option in the form of bottom-up approaches which engage with defined communities to develop locally-appropriate solutions to AMR behaviour. This community engagement approach has been successful in tackling other major health challenges specific to low and middle income countries, including HIV, TB and Malaria. However, at present it remains an underused tool in the field of AMR.

Our 3-day workshop in Nepal allowed a core group of over 40 researchers and practitioners to explore the potential of CE methods to address AMR through a range of interactive activities, workshops and discussion sessions. Expertise for some delegates lay within the CE method itself whilst others were based in the field of AMR and looking to expand their interventions. All were based in LMIC-settings and shared the goal of working in more creative and interdisciplinary ways to tackle health-based challenges.

LANGUAGE & METHODS

A photograph of a group of monkeys, likely macaques, sitting on a rocky path in a forest. The monkeys are of various shades of brown and orange, and some are looking towards the camera. The background is filled with green foliage and trees.

Delegates at our Nepal event agreed that language and labelling around both community engagement and AMR, could be a barrier to successful interventions. For example, projects working on sanitation and hygiene may not realise they are within the AMR space and as such may not highlight this within their project descriptions. This makes it challenging to identify all relevant projects, collaborate and share learnings. The incorporation of AMR-specific indicators into the sustainable development goals was seen by some delegates as a way of ensuring the visibility of AMR and the consideration of AMR impacts by researchers across disciplines. Discussions also showed that CE can be a broad term to define. To some it may mean the handing out of a questionnaire, whilst for others it is the immersion of the research team within their focal community. Explaining how each project defines CE to their stakeholders and audiences was seen as a critical step in raising the awareness of CE as an appropriate approach to tackle AMR and other One Health issues.

Many delegates discussed the lack of methodological support for designing, implementing and evaluating community-focused projects within AMR or other health themes. For many researchers with a pure STEM background incorporating artistic, participatory or social science methods can be challenging, uncomfortable and risky. A proposed solution to this barrier was to ensure greater interdisciplinary representation in the project team, allowing cross-cutting solutions to AMR challenges to be developed, and learnings to be shared between disciplines. This was seen as being a feasible solution due to the increasing number of cross-cutting funding calls being issued by research councils. Ensuring findings are shared via open access platforms was also seen as a way to encourage interdisciplinarity and the adoption of community engagement methods. Delegates discussed the need to find platforms to share their data collection tools, project manuals and other resources which could speed-up project development for other teams. The CE4AMR website has now been created to act as such a platform whilst also signposting to journals who allow similar resources to be published and peer reviewed.

COMMUNITY, CLARITY & COLLABORATION

It quickly became clear that defining community can be a major challenge in AMR research simply because AMR impacts everyone on a global scale. Delegates' take-home message on this issue was to ensure the problem you are investigating is specific to your focal community. This clear approach will help define core beneficiaries of each project but also the wider stakeholders (or gatekeepers) needed to reach these beneficiaries and support the project's development at the local level. Understanding language, power dynamics, social and cultural norms were seen as paramount to the success of the project particularly if multiple stakeholders are involved. This led on to discussion on the importance of in-country project partners who can advise and appropriately manage the concerns discussed above. There was clear agreement from delegates that where possible CE for AMR projects should be embedded into existing structures such as health clubs, community meetings or even school curriculums. Such a process allows the project to be molded to the local community but also allows easier (and in many cases more equitable) access for the participants. However, delegates from agricultural and farming research areas highlighted that this may be more of a challenge for their projects rather than those centered on human health care.

The community voice was seen as an essential component of project development but delegates stressed that their funding remit and restrictions could impact how much the community voice could genuinely shape the project. After discussion it appeared that within existing CE for AMR projects, community and wider stakeholders' voices should be valued equitably, but not always equally. For example, a project may be co-creating a resource to disseminate information on safe antibiotic use within their community. The community will be encouraged to lead the design of the resource so that it is locally meaningful and useful. However, the research team will need to ensure the information fits the aims of the research project, and is medically accurate to protect future audiences. Thus, although the community have an equitable voice in creating the resource this may not always be equally weighted. Equitable partnerships are thus likely to be a realistic expectation for CE and AMR projects. This discussion prompted considerations of pilot or pre-testing phases where projects can be shaped by the community in a truly collaborative manner. Such stages allow academic partners to better understand the local language around AMR, the culture of antimicrobial sourcing, usage and disposal and the social and cultural dynamics of their community. Hence it was agreed that piloting and pretesting have a dual benefit and represent good value for money from a funding perspective.

SCALABILITY, SUSTAINABILITY & EVALUATION

A major challenge around the use of community engagement in AMR was the scalability and sustainability of such projects. Many of the lightning talks discussed successful projects which were specifically tailored to the needs of the local community, embedded within local life and involving local partners and wider stakeholders. However, this specificity became a double-edged sword when considering how to scale the project and make it appealing to use in other settings. This clearly links to the challenge of evaluation because a project that is deemed successful in a particular setting may not be directly transferable to another. Delegates were particularly concerned with the health outcomes of AMR-based research. In health sciences the gold standard of evaluation is to use a randomised control trial (RCT) which simply may not capture the steady, incremental behavioural changes facilitated by a community engagement project. Mixed methods approaches were suggested as the best option, requiring the collection of both qualitative and quantitative data. However, there are still many questions to be answered around the validity and transferability of this approach, particularly when considering the impact of creative outputs which may not be easily verbalised.

OUTPUTS

It is hoped these learnings, gathered directly from researchers and practitioners, will shape the future of community engagement interventions with the AMR sphere. A briefing paper is currently under development regarding the key values and principles for successful application of community engagement approaches to AMR research. This will include methodological guidance and provide Case Studies of the values and principles in action.

Several network members are now collaborating on grant applications to bring CE to the forefront of AMR research. A monthly newsletter shares updates on the network success as well as broader CE and AMR related news. Finally, the CE4AMR website (<https://ce4amr.leeds.ac.uk/>) and twitter account (@CE4AMR) are live including project profiles, key resources and news updates within the fields of both CE and AMR. The network are always excited to hear from new members who can sign-up for the newsletter via the website. Suggestions for workshops, events and webinars are very welcome as we have capacity to deliver these through the University of Leeds team.

SUMMARY

The Nepal workshop of 2019 was a fantastic event, catalysing the CE4AMR network. It made great strides in linking projects of various sizes from the across the world and brought together researchers from seemingly disparate disciplines. The challenge now is to capitalise on the success of the workshop. We have a better understanding of who is utilising CE in AMR, and the successes they have had. We also understand the challenges that researchers and practitioners face in applying and evaluating CE methods within the AMR sphere. By considering the areas discussed above, CE4AMR aims to consolidate practical support, best practice guidance and troubleshooting advice through the website. Events, including physical workshops and online webinars, will allow information to be debated in a collaborative manor. Regular online communication will retain links between the projects who met in Nepal, and new network members. We hope this connection will foster collaborations to tackle AMR via CE approaches, providing more evidence to support the use of CE in governmental AMR policy and NGO guidance. It is the overarching aim of CE4AMR to showcase the value of community engagement methods to tackle the global challenge of antimicrobial resistance, particularly in low and middle income countries.

Notes for the organisers: *“The interactive nature of this workshop developed a trusting atmosphere with delegates open to sharing both success and failure and allowing a very honest dissection of some of the challenges faced around implementing community engagement methods in Global Health. Conversations acknowledged that methodologies are already diversifying across fields (design, anthropology) as a result of interdisciplinary collaborations. This was overwhelmingly viewed as a positive development which enhanced the skillset of researchers and their ability to engage effectively with their community and wider stakeholders. For example, one participant said biologists are now recognising that “using arts and humanities approaches is leading to the collection of better samples,” while another said that anthropologists appreciate that “using creative methods provides better insights than asking questions”. Organisers view these comments as supportive evidence for interdisciplinary workshops such as this one, and for the desire of researchers to work in diverse teams to tackle Global Health challenges. Although specific focus was placed on AMR, learnings from this workshop can be applied to a range of Global and One Health issues.”*

