

**PROJECT BRIEF**

# **COSTAR**

## **COmmunity Solutions To Antimicrobial Resistance**



## **VISION**

**COSTAR will co-create, implement, and robustly evaluate an innovative intervention that addresses the contextual drivers of AMR. We will do this through a One Health approach, build on an infrastructure for knowledge exchange which ultimately impacts on national and global policy.**

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# BACKGROUND

Antimicrobial resistance (AMR) is a major threat to global health, food sustainability and security, and socio-economic development. It is estimated that AMR infections cause approximately 700,000 human deaths each year globally, a figure that is set to rise to 10 million by 2050 if no action is taken. Multi-sectoral action that addresses human and animal health, agriculture, and the environment, through a One Health approach, is essential to address the profound implications of AMR. This is because antimicrobials used to treat infectious diseases in animals are often the same as those used in humans. Resistant bacteria arising either in humans, animals or the environment may spread from one to the other, and from one country to another. AMR does not recognize geographic or human/animal borders.



**Antimicrobials are misused in human and animal health settings, photo credit: HERD International**

COSTAR will run in both Bangladesh and Nepal. The study will address the drivers of AMR in community settings, building on two previously funded studies. Previous work in Bangladesh has adapted and piloted the Community Dialogue Approach (CDA) to address AMR. Training on AMR and facilitation skills was provided to volunteer facilitators, who then delivered community dialogues within their own communities. In Nepal, Participatory Video (PV) has been used to understand local communities' relationships with AMR. Small groups learned about AMR and developed filmmaking skills. They were then supported to produce short films showing AMR stories to share at community level. Process evaluations have shown that both approaches are able to engage communities on AMR, increase awareness of the One Health challenges around AMR, and impact local and national AMR policies.

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# OUR INTERVENTION

COSTAR will build upon these successful foundations by combining the PV and CDA approaches into a single intervention in each setting. COSTAR will use PV as a mechanism of generating knowledge to support the further development of CDA resources in each setting. Project teams will then use these resources to implement the CDA, and will assess its effectiveness for improving knowledge, attitudes, and practices in relation to AMR.

In both Nepal and Bangladesh, COSTAR will use PV and rapid ethnographic studies to understand the One Health context of antimicrobial resistance in each country. These learnings will support the development of contextually specific materials to support the training of CDA facilitators. CDAs will then be delivered in each country.

In Bangladesh, CDAs will be implemented across the catchment areas of 25 community clinics, each of which has an approximate population of 6000. The approach will be evaluated through a cluster-randomised control trial (RCT). COSTAR will also assess the scale-up cost and cost-effectiveness of the CDA, the extent to which it is equitable, gender sensitive and participatory, and its potential to be scaled up.



**A CDA taking place in the Comila district of Bangladesh, 2018. Photo credit: ARK Foundation**

In Nepal, COSTAR will explore the potential of replicating the approach within a different health system, community and cultural context.

COSTAR will also implement a capacity building strategy based on principles of equitable partnership, and a robust research uptake strategy to increase the visibility of CE approaches within the AMR research landscape.



**PV training in Kathmandu, 2019. Photo credit: HERD International**



# ACTIVITIES

To achieve the above objectives the COSTAR team will:

Collaborate with the Ministry of Health and Family Welfare (Bangladesh) and Ministry of Health and Population (Nepal) to ensure the CE approach is embedded within existing health system and community infrastructures.

Co-develop contextualised intervention materials that address AMR through a One Health perspective based on:

- Short films produced through a PV approach in which community members identify drivers of AMR and potential mechanisms to address those drivers.
- Rapid ethnographic studies that investigate communities' antimicrobial use and beliefs relating to antimicrobials and AMR
- Workshops with key stakeholders to ensure that the materials are culturally appropriate and in line with wider policy priorities.

Comprehensively assess the ability of the CDA to impact on AMR in low resource settings through:

- A cluster-randomised control trial (RCT), which will assess the effectiveness of the CDA approach to impact on AMR in the Bangladesh setting.
- Scale-up cost and cost-effectiveness analysis of the CDA.
- An evaluation of the extent to which the CDA is participatory, equitable and gender sensitive.
- A process evaluation to explore the potential for sustainability and implementation at scale
- Qualitative analysis of the Nepal implementation to assess the feasibility and acceptability of the CDA within a new context and setting.



# PROJECT DETAILS

**Full title:** Engaging communities to address antimicrobial resistance: Identifying contextualized and sustainable community-led solutions in low resource settings.

**Funder:** UKRI (UK Research and Innovation) GCRF collective fund

**Duration:** January 1st 2021 – December 31st 2023

**Host Institution:** University of Leeds (UK)

**Partners:** HERD International (Nepal), ARK Foundation (Bangladesh), Chittagong Veterinary University (Bangladesh), Malaria Consortium, University of Liverpool, University of Western Australia.

**Implementation settings:** Nepal and Bangladesh

**Website:** COSTAR : <https://ce4amr.leeds.ac.uk/costar/>

**Social Media:** Follow #COSTAR through @CE4AMR



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