

Project looks at links between poultry and antimicrobial resistance

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Newcastle University is co-leading an international project to better understand how changes in poultry production and consumption are affecting the rise in antimicrobial resistance (AMR).

AMR is a rapidly growing global issue and a World Health Organization (WHO) top five priority. Its increase has been linked in part to [overuse of antibiotics](#) in recent decades as part of animal health and welfare regimes.

AMR in agriculture and food systems is a critical area of concern, with increasing cases reported of strains of bacteria such as E.Coli, Campylobacter and Salmonella developing resistance to particular groups of [antibiotics](#).

The "Changing Food Systems in Kenya and Malawi and the Challenge of Tackling Antimicrobial Resistance' project, funded by UK Research and Innovation (UKRI) through the Global Challenges Research Fund (GCRF) Collective Program, will look at the ways in which rapidly changing cultures of poultry consumption and agricultural systems in Low and Middle Income Countries (LMICs) shape antibiotic use and misuse in farming.

The two-year program will explore the relationships between changing urban diets that include more meat and how food systems are being transformed to meet this demand, focussing in particular on the misuse of antibiotics in agriculture.

It will look in particular at the poultry sectors of Kenya and Malawi, especially the urban contexts of Nairobi and Lilongwe, given the rapid rise of [poultry production](#) and consumption in both places and the increased and weakly regulated use of antibiotics in production.

Working with partners at the African Population and Health Research Center, Nairobi, the University of Malawi, the University of Southampton and University College London, the research team aim to generate culturally and geographically-sensitive approaches to antibiotic reduction and stewardship initiatives that could help improve

implementation of those countries' AMR National Action Plans.

Professor Alex Hughes, professor of economic geography, Newcastle University, said: "Places in Africa are among those predicted to see the highest mortality rate from AMR by 2050. Policies and targets for the reduction of antibiotic misuse in agriculture are more likely to be effective if they are sensitive to the specific pressures, constraints, opportunities and [cultural values](#) experienced by farmers working within these [food systems](#). This research aims to better understand these local contexts and start thinking about how LMICs can continue to meet market demand while addressing the inappropriate use of antibiotics."

While antibiotics are a necessary tool to maintain animal health and welfare on farms, their inappropriate and disproportionate use not only reduces availability for humans but also catalyzes resistance.

The 2016 O'Neill report for the WHO, "Tackling Drug-Resistant Infections Globally," warned that if the challenge is left unaddressed, deaths resulting from AMR on a global scale are predicted to reach some 10 million per year within the next three decades.

More information: For more info visit gtr.ukri.org/projects?ref=AH%2FT004207%2F1

Provided by Newcastle University

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