

# Co-creating a gender toolkit to amplify the impact of antimicrobial resistance research

*Antimicrobial resistance (AMR) contributed to over 4.95 million deaths in 2019 – more deaths than those related to HIV and malaria combined. Unequal gender norms and power relations create different exposure risks to AMR, and influence who is able to access and benefit from preventative measures. However, the evidence base to inform this is still lacking and AMR studies are often gender blind. Better research evidence on the interplay between AMR and gender can guide relevant, impactful and sustainable mitigation strategies. In a first-of-its-kind project, a team led by the HSRC is collaborating with researchers to create tools to integrate gender considerations across the AMR research cycle. By **Ingrid Lynch***

**A**ntimicrobial resistance (AMR) has become a major global concern, with a devastating impact on people's health and livelihoods. Antimicrobial medicine has transformed healthcare by providing effective treatment for once deadly infectious diseases, and enabling medical breakthroughs in organ transplants and cancer treatment. However, the emergence of antimicrobial resistance in response to drug-selective pressure has jeopardised gains made against infectious diseases such as HIV/AIDS and tuberculosis.

Drug-resistant bacterial infections are a leading cause of death. The World Health Organization (WHO) recognises AMR, primarily driven by the inappropriate use and overuse of antimicrobials, as one of humanity's 10 major global health challenges. Plants and animals are also affected by AMR, causing the agricultural sector, including subsistence farmers, to sustain production losses and damaged livelihoods, which in turn jeopardises food security. AMR has a greater impact on low and middle-income countries (LMICs) and is widening the health gap between developing countries and the developed world. AMR is further complicated by gender and other socio-economic inequities. However, AMR research that considers the impact of gender remains limited.

## **Why gender matters**

As the 2013–2016 Ebola virus epidemic in West Africa and the global SARS-CoV-2 pandemic demonstrated, women and girls are disproportionately affected by infectious disease outbreaks. A 2022 study published in *Nature Microbiology* that examined the gender impact of such health crises in Africa found women were significantly more vulnerable to indirect health, social and economic consequences.

The burden of infectious diseases and AMR is disproportionately greater in less developed countries, where women also have less access to healthcare. Gender often intersects with marginalisation due to other socio-behavioural factors, such as socio-economic status, disability and age, to impact individuals in distinct ways. The WHO recommends adopting an intersectional gender lens to better understand the complex, overlapping ways social identities shape the progression and treatment of infectious diseases. This helps avoid a one-size-fits-all approach in research, policy and programmes, instead shedding light on the interplay of AMR, gender and other socio-behavioural factors, and how these are shaped by structural conditions such as economic and other inequalities.

While gender equality is recognised as a priority in the health and development agenda, limited research has explored how gender influences AMR, particularly in LMICs where social, structural and systematic challenges are contributing to the growing burden. Consequently, there is a lack of resources for AMR researchers in LMICs to draw on when integrating a gender lens into their studies.

## **A participatory approach to co-creating a gender toolkit**

The Human Sciences Research Council (HSRC), in partnership with Jive Media Africa and Mahidol Oxford Tropical Medicine Research Unit (MORU) in Thailand, is developing a practical toolkit to empower AMR researchers to integrate gender considerations into their research. The team has crafted a participatory process with end-users, particularly AMR researchers in LMIC settings. Co-development ensures that the toolkit is tailored to specific contextual challenges.



Researchers are also more likely to adopt and champion tools they have played a role in developing, leading to increased utilisation and impact.

The team hosted a series of expert consultation workshops from December 2022 to February 2023 with researchers in sub-Saharan Africa and Southeast Asia – the two regions with the highest AMR burden – where AMR researchers shared their experiences of applying a gender lens in their projects. By delving into these experiences, the workshops generated valuable insights into the kinds of tools researchers find helpful.

The consultations emphasised the importance of providing accessible ways for researchers to identify how, for example, gender norms and power relations might hamper the uptake of research innovations. The relevance for projects that appear gender-neutral, such as livestock vaccine development to counter overuse of antimicrobials, may not always be obvious. A participant shared how a vaccine delivery intervention that targets small-scale farmers – a sector with high participation by women in LMICs – might face implementation challenges if research does not explore constraints on women’s access to resources and decision-making power. A tool such as a simple gender analysis framework can strengthen researchers’ ability to meaningfully explore gender considerations.

### Refining the toolkit

Next, the team collaborated with global experts in AMR, gender, and intersectional frameworks to refine the emerging toolkit. Through online facilitated activities, participants offered ideas for shifting attitudes and norms around gender in AMR research, and ultimately nurturing more inclusive research practices, at each step of the research and innovation cycle. Participants also generated ideas about practical and relevant tools that can be applied across research disciplines and subject areas. AMR research covers a wide range of interconnected domains, including animal, human, and environmental health, and involves diverse research settings. The co-development process helped cut through this complexity, offering clear and practical entry points for researchers unfamiliar with gender theory and methodologies.

The toolkit will be launched mid-year. Ultimately, equipping AMR researchers with user-friendly tools to integrate gender considerations in their research enhances the quality and robustness of research findings and promotes equity and inclusivity. This, in turn, contributes to more effective strategies for addressing AMR and its social implications, leading to tangible positive outcomes.

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