Webinar Report

Gender Intersectionality in AMR*

The South Centre held a webinar on Gender Intersectionality in Antimicrobial Resistance (AMR), on 14 May 2025, with the participation of experts from academia, independent research institutions and international organizations. The webinar was attended by over 70 participants from around the world, demonstrating interest in gaining greater understanding of the gender dimension in effective strategies for tackling antimicrobial resistance.

Introduction

(Dr Afreenish Amir, AMR Consultant, South Centre)

AMR is a growing global health concern, and its impact is not gender-neutral. Gender norms, roles, and inequalities can affect access to healthcare, antibiotic use, and the spread of resistant infections. This webinar aims to bring together experts to discuss the current state of knowledge on gender intersectionality in AMR, identify gaps, and propose solutions.

Addressing the Gender Inequalities in National Action Plans on AMR

(Ms Zlatina Dobreva, Technical Officer, AMR Division, World Health Organization - WHO, Geneva)

* The report is based on the recording of the webinar.

Applying gender perspective when developing national action plans on AMR is crucial. This approach gained momentum with the WHO publication *People-centred approach to addressing antimicrobial resistance in human health* in 2023. This framework outlines 13 key interventions based on an analysis of challenges individuals face when seeking health services, diagnosis, and treatment for infections. The analysis revealed that a person's experience with resistant infections is often influenced by social determinants of health, including gender norms and relations. By acknowledging existing inequities, national action plans can better protect vulnerable populations from adverse health outcomes. The goal of developing the document is to address inequalities in the impact of AMR. The target audience includes national and subnational policymakers, technical staff, and other stakeholders involved in the AMR response. The objectives are to raise awareness about the intersections between AMR and gender, provide country-level recommendations, and establish monitoring indicators to track progress in incorporating gender considerations into national action plans.

Our work began with an analysis of existing national action plans on AMR, conducted in 2023. We found that most plans didn't mention gender, let alone account for gender inequalities in designing interventions. Only 19 plans briefly mentioned gender, and just one – Malawi – had extensive references to achieving gender equality as a core objective. Although this analysis is somewhat outdated, we know that other countries, like Uganda, have since conducted gender assessments. We collaborated with an external expert group to define our approach. We established a clear definition of gender and a key research question: how do gender-related factors influence vulnerability and access to prevention, diagnosis, and treatment of drug-resistant infections? We developed relevant search terms and screened academic and gray literature, mapping the evidence onto a gender analysis matrix with five domains: access to resources, labor and roles, norms and values, decision-making power, and policies, laws, and institutions. This matrix was integrated with the people-centered approach framework. Through this process, we engaged closely with the expert group to develop search terms, analyze evidence, formulate recommendations, and create a policy brief. A high-level overview of the evidence is represented in this heat map, showing that most evidence focuses on treatment and vulnerability to infection. Our evidence review revealed less prominent evidence on timely and accurate diagnosis and the impact of policies, laws, and institutions. This highlights the need for more research, particularly on the intersection of diagnosis and gender. Our literature review focused on gender-related factors driving AMR risk, but we couldn't conclude whether there were differences in AMR risk based on patient sex. However, other quantitative studies may help address this question.

Based on our review, we outlined 20 recommendations for addressing gender inequalities in AMR response when developing national action plans. These fall under seven key categories, including effective governance, awareness and education, strategic information, prevention, access to essential health services, timely diagnosis, and appropriate treatment.

Key recommendations include:

- ✓ Improving gender balance in governance structures
- ✓ Tailoring awareness campaigns for specific population groups

- ✓ Collecting and analyzing sex-disaggregated data
- ✓ Removing discrimination in health service provision
- ✓ Conducting retrospective reviews of diagnostic services for gender biases
- ✓ Considering unintended consequences of policies on antibiotic access

A crucial step is capturing and disaggregating data on AMR infections and antimicrobial use by sex, age, and other social stratifiers. This will help understand the issue and tailor interventions. The document includes a theory of change, linking recommendations to desired outcomes and impact, as well as example indicators for monitoring and evaluation. Our goal is to enhance awareness among AMR technical staff and policymakers on gender and AMR and provide actionable recommendations for national action plans. There's growing momentum around this topic, with global funds and grants beginning to include gender equity in their requests for country proposals. The ongoing update of the global action plan on AMR is an opportunity to integrate gender equity and disability inclusion dimensions.

Summary of AMR and gender recommendations

Overarching

1. **Short term.** Capture and disaggregate data on AMR and surveillance of antimicrobial use and other relevant data by, at minimum, sex and age and, where feasible, other social stratifiers.
2. **Short term.** Review existing national plans or strategies in the health sector or other relevant areas and incorporate policies or actions that strive for gender equality into the national action plan on AMR.
3. **Medium term.** Promote research to strengthen the evidence base on the intersections between gender and AMR.

Effective governance, awareness and education

4. **Short term.** Promote equal participation of women, men and other vulnerable groups and/or groups facing discrimination in the multisectoral AMR coordination mechanism and technical working groups.
5. **Short term.** Include representation from gender experts in the multisectoral AMR coordination mechanism.
6. **Short term.** Use context-specific messages, language and images in AMR awareness and education materials that actively address harmful gender norms and promote gender equality.
7. **Short term.** Use different and tailored approaches to raise awareness on AMR among vulnerable groups and/or groups facing discrimination.
8. **Medium term.** Strengthen the knowledge of health workers at all levels of health care on gender inequalities in the prevention, diagnosis and treatment of (drug-resistant) infections.

Strategic information through surveillance and research

9. **Short term.** Report on patients' sex, age and, where feasible, other social stratifiers as part of routine surveillance systems on AMR and antimicrobial use.
10. **Medium term.** Analyse, report and act upon the key gender-related inequalities identified from sex-disaggregated surveillance data on AMR and antimicrobial use.
11. **Long term.** Invest in new diagnostics for infections that disproportionally affect women such as (drug-resistant) urinary tract infections.

Prevention

12. **Medium term.** Improve WASH and waste management infrastructure in health facilities and community settings to ensure infrastructure is available, accessible and safe for all genders, and does not perpetuate stigma and discrimination.
13. **Medium term.** Identify and address gender inequalities in the risk of exposure to (drug-resistant) infections among health care workers and in community settings.

On vaccination, evidence supports the set of recommendations in the WHO Immunization Agenda 2030: Why Gender Matters *(2021)* report of gender mainstreaming across the entire immunization programme cycle.

Access to essential health services

14. **Medium term.** Deliver culturally sensitive and gender-responsive health services for the prevention, diagnosis and treatment of (drug-resistant) infections.
15. **Medium term.** Ensure health insurance and/or health benefit packages cover access to health services, diagnostics and antimicrobials for the treatment of (drug-resistant) infections without leaving behind vulnerable populations.
16. **Short term.** Identify and address gender inequalities in access to quality-assured medicines including antimicrobials, focusing on specific groups of women or men who might be at a higher risk of purchasing substandard or falsified antimicrobials.
17. **Medium term.** Update and implement standards on the forecasting and procurement of medicines including antimicrobials by undertaking an assessment of the local epidemiology of infections based on sex to ensure all relevant antimicrobials are included.

Timely, accurate diagnosis

18. **Long term.** Conduct retrospective reviews of diagnostic services for different (drug-resistant) infections to identify and address any gender inequalities.

Appropriate, quality-assured treatment

19. **Medium term.** Apply a gender analysis in regular retrospective prescription audits to identify unconscious gender biases or inequalities in prescribing practices.
20. **Medium term.** Conduct a gender assessment of the unintended effect of policies or regulations that aim to reduce over-the-counter sale of antimicrobials on access to essential antimicrobials.

Gender Intersectionality Lens to AMR

(Dr Deepshika Bhatijha, Indian School of Business, One Health Trust)

Community involvement is crucial in addressing AMR, as drivers of AMR extend beyond the healthcare sector to community-based factors like self-medication, misuse, and overuse of antibiotics, and poor hygiene practices. Understanding the diverse needs, preferences, and experiences of various socioeconomic groups is essential for effective AMR research, mitigation, and governance. A people-centered approach, considering gender and other social determinants of health, is vital. Biological differences between men and women, such as immune response and vulnerability to certain infections, can influence AMR. Women may be more prone to infections due to menstruation, pregnancy, and childbirth, while men may be more susceptible to microbial infections due to weaker immune responses. Behavioral differences also play a role in AMR. Men often exhibit riskier health behaviors, such as higher substance abuse, which can increase women's vulnerability to infections and antibiotic use through various channels, including violence and sexually transmitted infections (STIs). Cultural and social norms can further exacerbate women's susceptibility to infections and antibiotic use.

A framework published in *BMJ Global Health* illustrates how gender norms can influence AMR outcomes, including inadequate access to antibiotics, poor diagnosis, and increased antibiotic intake. In many South Asian economies, cultural norms around menstruation, caregiving, mobility, and financial control can limit women's access to healthcare and increase their risk of infection. Gender-biased health systems, inadequate representation of women in the medical field, and limited research on women's health can also perpetuate these issues. These factors can reduce women's access to safe menstrual products, nutrition, and healthcare, ultimately leading to increased susceptibility to infections, poor health-seeking behaviors, and inappropriate diagnosis and management by healthcare providers.

Research on gender and AMR in low-income countries reveals limited awareness of antibiotics and AMR, particularly among women, older adults, and those with lower education and socioeconomic status. A study in rural Karnataka found that wives had 45% less knowledge of antibiotics than their husbands, largely due to limited health information and caregiving responsibilities. In Vietnam, a study showed that women's bargaining power, driven by higher education and employment, was associated with better knowledge and use of antibiotics. In high-income countries, evidence suggests women are prescribed more antibiotics than men, with significant variations across states and racial groups. A global analysis of 70 countries found that women are prescribed more antibiotics than men, with a 34% higher prescription rate overall. Even after excluding antibiotics for urinary tract infections, the difference remains significant. Studies from the United States and United Kingdom also show similar trends, with women being prescribed more antibiotics than men across various antibiotic classes. The evidence highlights the need for tailored AMR solutions that address the needs of different populations, particularly in low- and middle-income countries where data is limited. Collecting and sharing sex-disaggregated data on antibiotic use and AMR is crucial to inform effective policies and interventions. Our 22-year data analysis reveals that within countries, increases in women's education and labor

force participation lead to lower antibiotic consumption. Conversely, women's parliamentary representation doesn't show a significant impact. We examined various empowerment indicators, including education, employment, and political participation. The data shows a downward trend in antibiotic consumption as women's secondary education and labor force participation increase. This trend holds true both across and within countries. When women's education rises or the gender gap in labor force participation narrows, antibiotic consumption decreases significantly.

I'm also part of the Just Transitions for AMR Working Group, a global, multidisciplinary group exploring the application of the just transitions framework to AMR. We've published a *The Lancet* commentary piece and conducted a workshop on the linkages between AMR, climate change, gender, and caste. The intersection of these factors is crucial, particularly in contexts like India where caste is tied to occupation and vulnerability to infection. We organized a workshop with experts from climate change, gender, and AMR to explore their intersections. A key takeaway was the importance of involving experts from diverse domains to foster meaningful collaborations. We also conducted a responsive dialogue meeting in London, funded by the British Academy, to influence the inclusion of gender and equity concerns in AMR policies. The evidence highlights that women are prescribed more antibiotics than men in high-income countries, while in low-income countries, women have lower knowledge of antibiotics and AMR. These findings have policy implications for women's health, AMR mitigation, and governance, emphasizing the need for tailored solutions that address the needs of different populations. To better understand the issue, collecting and sharing sex-disaggregated data on antibiotic use and AMR from the community is crucial. This would enable more effective messaging and solutions, particularly in low- and middle-income countries.

Panel Discussion

Dr Deborah Goff (Professor of Pharmacy Practice, Ohio State University, USA)

Working in over 35 countries, mostly low- and middle-income nations, I've witnessed firsthand the struggles women face in accessing healthcare. Distance to healthcare facilities, restrictive social norms requiring permission from husbands to leave home, childcare responsibilities, transportation issues, and lack of funding all hinder access. When examining health outcomes specific to gender, I've noted that women's bodies metabolize drugs differently due to higher body fat percentages, affecting pharmacokinetics and pharmacodynamics. Women's roles as caregivers often lead them to prioritize others' health over their own, declining care or delaying treatment. Social norms and stigma further exacerbate these challenges.

I've seen this play out in my experience with HIV treatment programs. Despite free medication being available, women would sometimes sell their medicines to feed their children due to the stigma associated with being HIV-positive. These cultural barriers result in poor health outcomes for women, highlighting the need for tailored approaches that address these unique challenges.

Dr Viviana Munoz (Health, Intellectual Property and Biodiversity Programme Coordinator, South Centre)

Addressing inequities is crucial in our work, particularly in developing countries, civil society engagement, awareness raising, policy advice, and technical assistance. To integrate gender-sensitive approaches in research and policy programs, we must first recognize that inequities exist and impact health outcomes, including access to healthcare and basic services like clean water. These inequities are relevant not only to human health but also to animal health, agricultural systems, and environmental health, all of which have their own gender dimensions. Building evidence through research is essential to inform policy and develop effective interventions tailored to local contexts. The WHO's new guidance is a welcome initiative, and disseminating this evidence and guidance is crucial. There are still many research gaps, but continuing to build evidence and disseminating it is key. Policy should also inform new areas of research, highlighting gaps and pushing researchers to focus on specific areas. The ongoing update of the Global Action Plan on AMR is an opportunity to integrate gender-sensitive approaches, and we should ensure that national action plans also prioritize gender sensitivity in their interventions.

To ensure that AMR policies and interventions are inclusive and responsive to diverse gender identities and expressions, we must prioritize inclusive design. This involves consulting widely, adopting an interdisciplinary approach, and thoroughly examining the evidence base. Before developing policies, we should assess the existing evidence and identify gaps to inform our decisions. Inclusive design is crucial because it sets the foundation for effective outcomes. If we don't start with a thoughtful and inclusive process, we risk creating policies that fail to address the needs of diverse populations. By prioritizing inclusivity from the outset, we can develop policies and interventions that truly respond to the needs of all individuals.

Dr Esmita Charani (University of Capetown, South Africa)

Socioeconomic factors like income, education, sex, and gender significantly impact AMR outcomes in different communities. Intersecting identities, including gender, ethnicity, migration status, and access to education, influence healthcare access, social norms, and cultural practices. For example, women often take on caregiving roles, prioritizing family members' health over their own. In the healthcare workforce, women are overrepresented in lower-paid caring jobs but underrepresented in

leadership positions. These factors affect access to healthcare, clean water, sanitation, and hygiene, ultimately impacting AMR outcomes. Different communities face varying levels of risk due to social determinants of health. Women may be disproportionately affected by limited access to education, healthcare, and resources. Climate change also exacerbates maternal mortality and morbidity.

To increase awareness and education about AMR among women and marginalized groups, we should focus on addressing healthcare system inadequacies and inequities rather than placing the onus on individuals. Awareness campaigns should consider the drivers of healthcare-seeking behavior and inequities in accessing effective antibiotics. Existing AMR campaigns often target women, but we need to examine the underlying reasons for healthcare disparities and inequities. By prioritizing inclusive and equitable healthcare systems, we can better address the needs of diverse populations and mitigate the impact of AMR.

KEY TAKEAWAYS

- ✓ Despite the challenges in the current political climate, we must prioritize gender equity, diversity and inclusion, and create more evidence to demonstrate its importance
- ✓ Addressing gender disparities in healthcare requires respectful collaboration with all sectors
- ✓ Effective AMR interventions require understanding the dynamics between people, including real drivers and behaviours. The people-centred approach highlights that AMR is not just a technical issue, but a complex problem influenced by human factors.