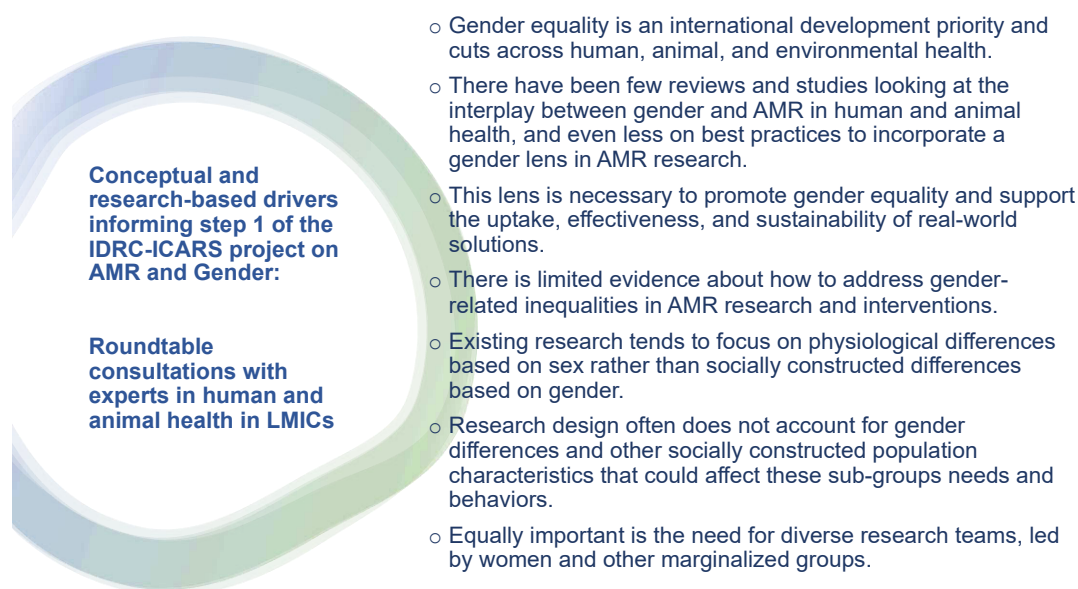# SUMMARY OF ROUNDTABLE BACKGROUND AND PROCESS

Gender equality is an international development priority and cuts across human, animal, and environmental health. There have been few reviews and studies looking at the interplay between gender and antimicrobial resistance (AMR) in human and animal health, and even less on best practices to incorporate a gender lens in AMR research. This lens is necessary to promote gender equality and support the uptake, effectiveness, and sustainability of real-world solutions. The importance of this is highlighted by some key comments from participants in the roundtables.

"I can't believe it's taken all this time to focus on gender in AMR"

"When AMR interventions focus on gender, we will see people centred approach and effective implementation"

In 2021, IDRC and ICARS initiated a series of three scoping virtual roundtable consultations with experts from around the globe. These consultations intended to identify priority knowledge gaps relating to gender and inclusivity in AMR prevention and containment in human and animal health in low-middle-income-countries (LMICs). This consultation process was rationalized by the drivers outlined in Figure 1. The aim of the roundtable consultations was therefore to identify knowledge gaps at the intersection of (1) AMR prevention and containment in human and animal health and (2) gender and interconnected socio-behavioral characteristics. IDRC and ICARS gratefully thank the 31 roundtable participants for sharing their time and expertise in generating ideas about the possible knowledge gaps at the interface between gender and antimicrobial resistance (AMR) in human and animal health.

FIGURE 1 CONCEPTUAL AND RESEARCH-BASED DRIVERS INFORMING THE ROUNDTABLE CONSULTATION [1-9]

Conceptual and research-based drivers informing step 1 of the IDRC-ICARS project on AMR and Gender:

Roundtable consultations with experts in human and animal health in LMICs

o Gender equality is an international development priority and cuts across human, animal, and environmental health.

o There have been few reviews and studies looking at the interplay between gender and AMR in human and animal health, and even less on best practices to incorporate a gender lens in AMR research.

o This lens is necessary to promote gender equality and support the uptake, effectiveness, and sustainability of real-world solutions.

o There is limited evidence about how to address gender-related inequalities in AMR research and interventions.

o Existing research tends to focus on physiological differences based on sex rather than socially constructed differences based on gender.

o Research design often does not account for gender differences and other socially constructed population characteristics that could affect these sub-groups needs and behaviors.

o Equally important is the need for diverse research teams, led by women and other marginalized groups.

Thirty-one (25 women and 6 men) experts from 20 countries (12 LMICs and 8 high income countries) participated in one of three three-hour virtual roundtables. Participation was by invitation. Over half (58%) of the participants have expertise in human health and AMR and 32% in animal health and AMR, with gender expertise evenly spread across both fields.

The virtual roundtable methodology adopted a structured brainstorm idea-generation approach, which is used for participatory planning and decision making in diverse settings. The evaluation of the process was overall very positive, with good engagement, the ability to freely express ideas, and the generation of sufficient content to meet the aim of the roundtables.

Roundtable discussions were each guided by two questions aimed to stimulate participants to reflect on the linkages between AMR and gender, and to apply a gender lens to AMR interventions in human and animal health for better AMR mitigation outcomes (Figure 4).

Question 1

In what way is gender important in AMR research processes and implementation?

Question 2

What must change to achieve gender equality and inclusivity in AMR research processes and implementation? AND How can these changes be achieved?

FIGURE 2 ROUNDTABLE STIMULUS QUESTIONS

SUMMARY OF INITIAL ROUNDTABLE OUTPUTS

FIGURE 3 ANCHORING CONCEPT AND EMERGENT THEMES

Four broad knowledge gap themes emerged, which were anchored in a common concept of differential impact of gender and AMR (Figure 3).

Differential impacts of gender and AMR

The differential reciprocal effects of gender, AMR and AMU

Research directions for a deeper understanding of the structural determinants of gender and inclusivity inequalities in AMR for evidence-based solutions

The systemic and structural biases of AMR research, policy, implementation and research funding environments

Translation of gender-transformative research outcomes into usable knowledge for AMR implementation and sustainability

The following analysis shows that addressing differential impacts requires a **deeper and evidence-based understanding** of how structural gender and intersecting identity factors impact AMR mitigation (theme 1), of how structural gender and social identity determinants interact to drive differential impacts (theme 2), uncovering, and changing the systemic and structural gender biases of institutions (e.g. research, policy, implementation, and funding environments) to ensure that "best evidence speaks to everyone" (theme 3), and translating gender-transformative research outcomes into usable knowledge for implementation and sustainability (theme 4). In this text, direct quotes from roundtable participants are indicated by quotation marks and are italicized.

Theme 1: The differential reciprocal effects of gender, AMR, and AMU

This theme deals with the "what" element of gender and AMR, with the key notion being reciprocal dynamic of AMR/AMU and gender. This means AMR/AMU affects gender, and vice versa. This was reported across human and animal health domains and requires research to understand the dynamics in more detail and identify how each variable interacts and the nature of this interaction. For example, different ways that the relationship between gender and AMR/AMU could vary are shown some participant contributions:. *" The different decision-making roles for male and females can affect access to information and resources, knowledge and awareness of (and thus vulnerability to AMR). It*

was also stated that Gender acts as a catalyst in bring out health outcomes, exposure to risks and health seeking behaviours."

This can also be broken down into sub-themes as reported in the roundtables, for specific AMR-related issues such as;

- Access to antimicrobials (e.g. "*gender inequality in access to effective antimicrobials", "different decision-making roles for men and women can affect access")*;
- Differential exposure to pathogens related to physiological differences ("*Biological and physiological needs of men and women are different, some pathogens predominantly affect women e.g., GBS", "women as clients in maternity settings - exposure to pathogens such as K. pneumoniae")*;
- Increased AMR exposure and vulnerability related to social roles such as household family care, food production and livestock responsibilities ("*Women are the primary caregivers in families and animals", "Women and girls are care givers of the sick and may have exposure to AMR at health facilities", "Women are vegetable growers & cooks. AMR comes up via /in raw veggies").*

Theme 2: Structural determinants of gender and inclusivity inequalities in AMR.

This theme aims to understand the "how" of the structural links between gender and AMR in human and animal health. A nuanced approach is needed to understand and explore the social construct of gender and notions of the meaning of inclusivity. This means to go beyond gender as biology/sex differences or as a social construct, and **shift from a focus on individual decision making towards understanding structural factors**. Similarly, vulnerability, marginalization and inclusivity across all gender and sexual orientation dimensions need to be more deeply understood in an AMR context.

Further clarity is needed for the use of terms to describe identity groups*, "for example not to conflate gender identity with gender (social construct) and sex, while interconnected, they are not the same."* Clarity is also needed to explore the role of *women as actors and victims in the AMR discourse, for example "women have a key role to play as actors in mitigation while women are vulnerable as victims in being blamed for AM misuse and vulnerable to high levels of exposure environmentally."*

Theme 3: Biases of AMR research, policy, implementation, and research funding environments (structural or systemic).

Gendered institutional structures influence the AMR research and policy narrative and prioritization of research agendas, but must include the input of women and other marginalized voices. Some comments included that "*Bio-medical research and product development is critically important, but so too is a nuanced understanding of the interface between biomedical innovations/solutions and people of different identities and contexts".* Participants felt that the AMR researcher landscape is dominated by *"experts who are bio-medical &/or white/HIC &/or men"* and there is "*under-representation of women in basic research".* There was also "*high(est) value of positivist and quantitative approaches*" and a "*lack of value placed on gender analysis/ social science*".

Research is needed into systemic change required at institutional levels as well as at the level of research paradigms. This could target mechanisms that result in the exclusion of women and marginalized groups from education, decision making, funding, opportunity, and participation across all levels of research, policy and implementation. It was suggested to change funding practices, and promote qualitative, critical, and participatory research models in research and implementation.

Theme 4: Translation of gender-transformative research outcomes into interventions (policies, programmes, and practices) for sustainable AMR mitigation.
This research theme places gender transformation at its core. It goes further to emphasize gaps in gender informed evidence and a deep gendered dimension for measurement (e.g. in surveillance). The deliberate positioning of gender as a change driver in research and action should yield a gender

transformed implementation to sustainably impact AMR and AMU and mitigate unintended impacts. Through improved inclusion, both research outputs and interventions will be more transferable and relatable. AMR containment approaches must include the perspectives of decision-makers, professionals (human and animal health), communities in understanding the social and gendered dynamics of AMR and gender in and across human and animal health.

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