Antimicrobial Resistance Multi-Stakeholder Partnership Platform

Embedding animal welfare in the IPEA mandate: a One Health imperative for curbing antimicrobial resistance (AMR)

A contribution from the Action Group on Animal Welfare - AMR Nexus to the creation of the **Independent Panel on Evidence for Action against AMR (IPEA)**

POLICY BRIEF | SEPT 2025

Improving animal welfare to reduce antimicrobial use: a One Health lens

About this paper

As the Independent Panel on Evidence for Action against Antimicrobial Resistance (IPEA) takes shape, **this brief urges the integration of animal welfare into the scope of work and structural framework of IPEA.** The brief highlights the role of animal welfare in reducing the need for antimicrobials and offers recommendations to embed it into the work of IPEA, thereby enhancing the scientific robustness and practical relevance of the Panel's outputs.

Context

The UN General Assembly's political declaration on antimicrobial resistance (AMR) set ambitious goals to reduce antimicrobial use (AMU) in agrifood systems by 2030, which will be supported by the formation of the Independent Panel for Evidence for Action Against AMR (IPEA).[1]

A recent analysis indicates that global antibiotic use for livestock could increase by 30% by 2040 compared to 2019.[2] Although AMU in animals has been decreasing over the last decade, progress has slowed down.[3] Using antimicrobials for growth promotion is still practiced in at least 34 countries around the world, as reported in the last Animal Antimicrobial Use Global Database (ANIMUSE).[4] A study showed that countries still using antimicrobials for growth promotion use antimicrobials 45% more than countries that do not.[5]

The use of antimicrobials in healthy animals for disease prevention is also still a common practice, which could be significantly reduced through better animal welfare practices, supporting animal health and productivity.[4–8] In addition to the health benefits of reducing AMU, it is predicted that a 30% global reduction in AMU can increase global GDP by US$120 billion between 2025 and 2050.[5] The responsible and prudent use of antimicrobials is supported by international standards in animal health.[9]

The routine use of antimicrobials in animals is fuelling AMR, especially in intensive farming systems. Stress, in addition to suboptimal animal management and disease prevention, increases the risk of infection and disease, resulting in widespread administration of antimicrobials to entire herds or flocks. This accelerates AMR, with resistant pathogens spreading via food, water, air, direct contact, and environmental contamination.[10]

Animal welfare matters

Animal welfare is critical to reducing antimicrobial use (AMU).[11] Practices such as lower stocking densities, the use of slower-growing breeds, improved housing and management, enhanced nutrition, biosecurity, and access to veterinary care and preventive medicine improve animal welfare, lower infection risks and reduce the reliance on antimicrobials.(12–16) For instance:

- **In poultry**, slower-growing breeds and lower densities reduced antibiotic use and mortality in Dutch farms.[12] Higher stocking density has also been identified as a major risk factor for disease outbreaks in Pakistan.[17]
- **In pigs**, higher weaning ages and outdoor systems lowered antibiotic use for gut diseases in Danish herds.[18] Moreover, reduced stocking densities and post-weaning mortality risk were associated with less AMU in Japan.[19]
- **In calves**, outdoor rearing in Switzerland reduced respiratory and gastrointestinal illnesses, leading to less AMU.[13] In beef cattle, lower AMU was observed with higher welfare conditions in fattening farms.[20]
- **In tilapia**, training farmers and other stakeholders on tilapia welfare in Egypt was identified as one of the key areas for improving health, production, and reducing antimicrobial use.[21]

The opportunity for the IPEA

The IPEA will be established to deliver rigorous, policy-relevant, and systems-oriented evidence to address AMR through a One Health lens.[22] Recognising the impact of the animals' welfare and affective states on the emergence and spread of AMR will enrich the quality and relevance of IPEA's recommendations and would contribute to a more nuanced and comprehensive understanding of disease emergence and AMR dynamics. This presents an opportunity to strengthen the Panel's impact by:

- **Aligning with the IPEA's stated principles of inclusivity, comprehensiveness, and systems thinking** by integrating the discipline of animal welfare into its assessments, in line with the One Health approach, considering the interconnectedness of humans, animals and the environment.

- **Strengthening the scientific basis of recommendations** by incorporating animal welfare as a key discipline. This integration allows for a deeper understanding of the human–animal–environment interface, particularly the role that stress, sub-optimal management conditions, and compromised animal welfare play in increasing disease susceptibility and driving AMU.

- **Enhancing the uptake of practical, locally adaptable interventions supporting AMR National Action Plans** by promoting context-specific animal management strategies that improve welfare while reducing AMU. This includes recognising the diversity of farming systems across low- and middle-income countries (LMICs) and supporting measures that ensure animal health and protect economic stability without over-reliance on antimicrobials. In doing so, interventions can both protect animal welfare and secure the livelihoods of communities that depend on livestock supporting them to transition to more sustainable and safer practices to protect global health.

- **Addressing the co-benefits of improving animal welfare to other global issues**, such as climate change, pollution, zoonotic disease emergence and spillover and biodiversity loss. Our society faces multiple challenges, and the trade-off of potential strategies/activities needs to be evaluated. Better farming practices leading to improved animal welfare can also support mitigation strategies for climate impact, decrease pollution and increase conservation of wildlife habitats and biodiversity which at the same time reduces pandemic risks.

Policy recommendations

- **Integrate animal welfare into IPEA's scope of work** and, where appropriate, establish a dedicated working group to examine how welfare states influence disease risk and AMU and to support interdisciplinary research to embed welfare considerations across the Panel's evidence and outputs.
- **Provide scientific evidence to help recognise animal welfare as a cornerstone of prevention strategies** in AMR mitigation policy, programming and implementation. Animal welfare-based risk factors should be incorporated into AMU/AMR evidence synthesis, to ensure holistic assessments of AMU drivers and strengthen the scientific and policy relevance of IPEA's work.
- **Translate scientific evidence into applied recommendations to help governments integrate animal welfare as one of the key priority actions into National Action Plans on AMR**, reflecting animal welfare as a core component of animal health and, consequently, to the One Health approach.

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About this document

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