



Report of the first meeting of the Quadripartite Technical Group on the Economics of Antimicrobial Resistance

4 April 2023

Meeting Report

QTG-EA Members: Andre Luiz de Abreu, Argaw Ambelu, Darwin Bando, Josephine Gakii, Djo Gikic, Jay Gomboso, Guillaume Lhermie, Yasser Mahmmoud, Aashna Mehta, Dominic Moran, Justice Nonvignon, Raymond Oppong, Olga Perovic, Julie Robotham, Rosa Rodriguez-Monguio, Amna Siddiqui, Hadeer Swedan, Wei Wang

Quadripartite organizations members: Dr Haileyesus Getahun (WHO), Alejandro Acosta (FAO), Holy Teneg Akwar (WOAH), Aitzbiber Echeverria (UNEP), Edna Massay Kallon (WOAH), Chantal Morel (WHO), Jean-Pierre Nyemazi (WHO), Wondmagegn Tirkaso (FAO), Antonio Valcarce (FAO)

Invited experts: Dr Andrea Bassi (KnowlEdge Srl), Dr Michele Cecchini (OECD), Christine Leopold (Triangulate Health), Aliénor Lerouge (OECD)

Process of the meeting: The first official meeting of the Quadripartite Technical Group on Antimicrobial Resistance (QTG-EA) was held virtually on 4 April 2023 (12h300-14h30 Central European Time). The meeting was chaired by Jean-Pierre Nyemazi, Lead, Quadripartite Joint Secretariat core group on economics of AMR.

The agenda of the meeting covered four areas: (1) An introduction to the overall Quadripartite work on the economics of AMR; (2) Estimation of the cost of inaction (conducting business as usual) amongst humans; (3) Estimation of the cost of inaction (conducting business as usual) relating to the environment; (4) Estimation of the cost of inaction (conducting business as usual) within the livestock sector.

The following key issues were discussed during the meeting:

- A. Dr Haile Getahun outlined the QJS planned work on the Economics of AMR, detailing the rationale for undertaking this work now and how it fits into the overall discussion going on with the main international political fora such as the G7, the Global Leaders Group on AMR and events leading up to UNGA HLM on AMR in 2024. While global estimates for the cost of inaction have been made in the past (the last major estimate coming from 2017 data), the attention that Covid-19 has brought and the improved clarity surrounding clinical burden and environmental dimensions have heightened the sensitivity to AMR amongst global leaders today. This creates an imperative to translate the burden of AMR into economic terms to speak directly to these leaders – and help raise the funding that we need to respond to AMR.
- B. Aliénor Lerouge and Dr Michele Cecchini explained the structure of the OECD Strategic Public Health Planning (SPHeP-AMR) that they are using to examine the costs associated with AMR amongst humans. Whilst the model has been used in the past to estimate economic consequences of AMR, it has been updated and is being used differently in this



exercise. Previously it focussed on OECD countries, but it has now been expanded to cover all countries, aggregated by region. The model uses the most recent mortality figures from the IHME studies published in 2022. Costs related to direct cost of prolonged treatment due to resistant infections and indirect costs deriving from changes to the labour force. Different scenarios will be tested.

- C. Dr Andrea Bassi presented the initial structure of the stock-and-flow model capturing the various ways in which AMR moves through and directly affects the environment. As the effects of AMR on the environment are poorly documented in the literature, assumptions and potential ranges will need to be tested. Recent data gathered by UNEP has shed light on the numerous dynamics that will be accounted for.
- D. Dr Alejandro Acosta provided an overview of the Livestock Policy Simulation Model (LPSM) that FAO and WOAHA are working with to examine the potential impact of AMR in livestock as rates increase. The work is informed by FAOStat which has volume data from all countries, and by WOAHA data on AMU. Selection of optimal biomass calculation methods are under consideration and will likely be shared at the next QTG meeting.

Discussion: The experts noted the proposed approaches and offered technical advice. A more detailed discussion will have to happen.