



Report from the Global AMR R&D Hub Workshop

Increasing Investments for AMR R&D

28 May 2019, Geneva, Switzerland

WORKSHOP OBJECTIVE

This workshop was organized by the Global AMR R&D Hub with the objectives to identify and discuss the opportunities and barriers for investments and new and innovative financing mechanisms for AMR R&D using a global One Health approach and to increase collaboration between the One Health sectors. The goal of the workshop was to articulate recommendations for AMR R&D that can be tracked and followed up by the Global AMR R&D hub.

KEY MESSAGES AND REMARKS

- R&D on new antimicrobials alone will not resolve the AMR challenge: infection prevention and control (IPC), access and stewardship need to be considered. For low- and middle-income countries (LMIC) capacity building, strengthening of health systems including surveillance and IPC as well as community engagement are priorities.
- Vaccines play a key role in preventing AMR both for human and animal sectors.
- International collaboration and coordination in a One Health approach continues to be highly relevant, including information gathering and setting global priorities.
- It was highlighted that while specific sectors are engaged in coordinating R&D efforts, there is a need for the Global AMR R&D Hub to bring a higher-level global coordination to help support prioritization and informing decision makers.

KEY RECOMMENDATIONS

1. Look at how to mainstream AMR in investments; consideration through an “AMR lens”: when building schools, water and sanitation investment etc.
2. Research and innovation is needed across all aspects of AMR including diagnostics, vaccines, surveillance, IPC, transmission of resistance, the interaction and impact of activities between different sectors and applicability in LMIC.
3. Social sciences research on behavioural change is needed to address AMR in both animal and human sectors
4. A balanced approach to push and pull incentives when developing new products is needed that prioritizes the global public health need.
5. A more strategic and incremental approach needs to be looked at in making private investment decisions instead of waiting for globally coordinated investment decisions.
6. Countries could explore predictable and sustainable financial investment models, similar to what the United Kingdom and Sweden are doing.
7. Streamline clinical trials and encourage continued efforts to regulatory convergence and alignment in both animal and human sectors.
8. Increase access to, awareness of, and training on role of diagnostics; also need to embed the use of diagnostics in guidelines and practice recommendations.

FOLLOW-UP BY THE GLOBAL AMR R&D HUB

Based on the workshop's recommendation two key areas were identified for greatest impact of the work of the Global AMR R&D Hub and provide high-level recommendations for decision makers.

By increasing and improving global AMR R&D collaboration and by developing the Dynamic Dashboard¹, the Global AMR R&D Hub will be able to progress work under the two identified areas listed below:

- Tracking of incentives/increasing investments
 - Financial incentives: track progress on push and pull incentives (e.g. testing and implementation of investment/pilot models by countries; health insurances and hospitals, alternative investors, etc) and with consideration of access, stewardship and intellectual property.
 - Track social science research on behavioral change including the use of antimicrobials, vaccines and uptake of diagnostics IPC, strengthening of implementing regulations and rules, community engagement.
- Facilitate and support cross-sectional collaboration
 - Leverage existing resources and relevant stakeholders/partners/countries initiatives and activities and (co-)organize workshops, conferences, meetings.
 - Identify gaps and priorities - areas of greatest unmet need through analyses based on the dynamic dashboard.
 - Increase and provide opportunities for interaction/exchange of all One Health sectors by using the dynamic dashboard and convening cross-sectional meetings.
 - Supporting stakeholders in improving the process for advancing interventions (streamline clinical trials, regulatory convergence) through communication and collaboration.
 - Keep AMR on the global agenda through active and consistent communication.
 - Work together with stakeholders, including G20 countries, highlighting the R&D priorities and gaps.
 - Promote the work of the Global R&D Hub and its role in advancing the AMR global agenda.

It will be important for the Global AMR R&D Hub to consider and link with other work and initiatives in the AMR field when progressing recommendations. These include, but are not limited to, the impact of AMR on the achievement of the Sustainable Development Goals and universal healthcare coverage, the Global Action Plan on AMR, as well as AMR national action plans, global AMR burden, the ad hoc United Nation's Interagency Coordination Group on AMR report, and priority AMR pathogen lists.

WORKSHOP OVERVIEW

The workshop was well attended (about 80 participants) and attracted participants from a variety of organisations and countries (about 25), including LMIC. The list of organisations and countries is given in Annex 1.

The workshop was opened by Bersabel Ephrem, the Vice-Chair and current acting Chair of the Global AMR R&D Hub Board of Members and Director General, Centre for Communicable Disease and Infection Control, Public Health Agency of Canada. Introductory remarks were provided by Chieko Ikeda, Senior Assistant Minister for Global Health Japan. The Keynote presentation was given by Dame Sally Davies, Chief Medical Officer for England.

The workshop included three plenary sessions, a panel discussion and a breakout session. The workshop programme and presentations are listed in Annex 2. The first two plenary sessions focused on One Health activities; in **Plenary Session 1** different aspects of investments and R&D in AMR were addressed, while **Plenary Session 2** focused on approaches of the private sector in animal health and diagnostics as well as the role of vaccines in tackling AMR. The presenters were then invited to participate in a **Panel Discussion**

¹ A global knowledge centre for all AMR R&D activities across the One Health continuum currently being developed by the Global AMR R&D Hub.

led by Padmini Srikantiah from the Bill & Melinda Gates Foundation and Larry Kerr from the US Department of Health and Human Services. The panel discussion provided ideas for the afternoon breakout sessions and key messages included:

- The importance and value of including vaccines; WHO's guidance document about vaccines and inclusion of AMR in the Global Vaccine Action Plan (GVAP) 2020-2030 were welcomed; acknowledged vaccine hesitancy in the animal health sector and that vaccines are scientifically challenging to develop, hard to bring to market and not relevant to all infections or situations.
- The need to focus and include LMIC in approaches to tackle AMR as the problems are much higher and evidence is lower and go beyond the development of new antibiotics. This includes lack of awareness (public and professional), access and stewardship and IPC.
- Diagnostics are vital to enable appropriate prescribing of antibiotics, new diagnostics must be practicable, affordable, fast, applicable for LMIC settings, and able to be used at the point of care. There is a need to increase access, awareness and training of the role of diagnostics.
- IPC measures should be considered in all relevant investments such as schools, hospitals, water and sanitation infrastructure.
- The need to contextualize the implementation component and learn from the malaria and tuberculosis fields.

The **third Plenary Session** focused on country perspectives and several interesting questions and points were raised, such as:

- Stop working in silos to go further and more towards concrete actions.
- The need to communicate results from testing reimbursement models at country level and importance of international collaboration between countries for example.
- The importance of IPC measures was highlighted.
- LMIC cannot provide much financial support, but can expedite drug discovery programmes (e.g. clinical trials, data).

Participants then chose to participate in one of three breakout sessions (human sector, animal sector and LMIC, led by Jean-Pierre Paccaud from the Global Antibiotic Research & Development Partnership (GARDP), Delia Grace Randolph from the International Livestock Research Institute (ILRI) and David Kaslow from PATH, respectively). Key messages from the **Breakout Sessions**:

Human sector – Following on from the presentations from the Plenary Sessions it was discussed which additional sources for investing in AMR R&D for human health could be used. It was concluded that more countries should try incentive models. The portfolio of approaches for financing AMR R&D needs to be used in the best possible manner and evolved appropriately.

Animal sector - Participants addressed the role of agriculture contribution to human AMR and identified two key areas: A better understanding of transmission routes in order to provide evidence-based interventions and addressing interventions and incentives with focus on policy areas and implementation of regulations.

LMIC - Participants highlighted that in LMIC there are problems that require action across all of the Global Action Plan on AMR's five strategic objectives and that the problems are interlinked. However, fundamental health system strengthening is required before addressing any specific issues. It was suggested to start with IPC, then surveillance with a focus on capacity building and using an integrated One Health approach. This would provide data to set the research agenda specific for LMIC.

The workshop concluded with **Closing Remarks** by Andrea Spelberg, Head of Division for Global Health Research, German Federal Ministry of Education and Research.