

Call to Action on Antimicrobial Resistance 2021

Virtual conference
#StopSuperbugs



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INTRODUCTION

Call to Action on Antimicrobial Resistance Conference 2021

Building on the success of the previous Call to Action on Antimicrobial Resistance (AMR) conferences held in Berlin (2017) and Ghana (2018), the governments of Denmark, Colombia, Ghana, Indonesia, Thailand and Zambia, with the International Centre for Antimicrobial Resistance Solutions (ICARS), Fleming Fund, UN Foundation, UNICEF, Wellcome Trust and the World Bank, together hosted a third meeting in November 2021.

The conference took place against the backdrop of the ongoing COVID-19 pandemic and a period of significant pressure on health systems. Concurrently, [data released](#) since the Call to Action 2021 has revealed that at least 1.27 million deaths per year are directly attributable to antimicrobial resistance.

To stem this tide, delivery of National Action Plans (NAPs) is underway to control the growing threat AMR poses to healthcare systems worldwide, our ability to depend on modern medicine, and the ripple effects in the animal and environmental sectors.

The Call to Action Conference aimed to reinvigorate AMR discussions and accelerate mitigation efforts by facilitating the sharing of best practice solutions that will support governments, particularly in low- and middle-income countries (LMICs), to make effective and impactful decisions on AMR.

COVID-19 has highlighted the fragility of health systems around the world, but effective solutions to protect global health against rising AMR already exist. Now is the time for countries to share best practices, build on commitments and accelerate action to save lives.

The conference was held virtually from 15-17 November 2021, bringing together stakeholders from across sectors, including policymakers, civil society organisations, professionals, academics, and industry. Over 350 delegates from 70 countries participated, hearing from speakers sharing experiences from across Africa, Asia, Europe, North America, and South America. A mixture of plenary and breakout discussions focused on celebrating pioneering actions taken so far across the One Health spectrum, exploring potential solutions to address persisting challenges facing AMR efforts, prioritising specific interventions to implement NAPs, and learning from wider global health agendas to accelerate change.

A number of key messages came through strongly from across the three days of discussion.

- Countries are working hard to deliver on commitments set out in their AMR NAPs, but more can and must be done to translate global commitments into action at a local level. Core to this will be sharing of evidence and best practice to empower others to take up solutions we know can work.
- While the pandemic has disrupted AMR action there are a great deal of advancements and learnings that the AMR community can benefit from. With few challenges more far-reaching than AMR as it threatens our health, livelihoods and economies at a global level, action on AMR must be aligned to preparations for future pandemics.
- We must take an inclusive approach to the AMR response. This means working in partnership across sectors and the One Health spectrum, encouraging ownership of AMR initiatives across disciplines and ministries. This also means appreciating the role citizens must play in the AMR response, taking time to understand their experiences and using this experience to co-design initiatives and create new AMR champions.

This report outlines key discussions from the conference, including details of tried and tested interventions and lessons learned from countries around the world that we hope can be leveraged by others. Urgent action is needed to save modern medicine and protect health systems.

KEY DISCUSSION THEMES AND LEARNINGS

1. NATIONAL ACTION PLAN IMPLEMENTATION

Many global platforms, including the [Global Leaders Group](#), [AMR Multi-Partner Trust Fund](#), and the 2021 [UN High-level Dialogue on AMR](#) continue to advocate for action to combat AMR. This has led to increased recognition of AMR as a priority by global leaders and has supported the inclusion of an AMR indicator within the Sustainable Development Goals (SDGs), given its potential impact to these goals both directly and indirectly.

The majority of countries have now developed their AMR NAPs, as evidenced by the [Tripartite AMR Country Self-Assessment Survey](#) that has monitored progress since 2016. However, the challenge now is moving from paper to action: many plans still lack concrete political commitment or budgetary allocation, meaning that implementation has broadly been fragmented and slow.

Furthermore, COVID-19 threatens to undermine progress on AMR by causing disruption, shifting resources and accelerating the unnecessary use of antimicrobials. The significant pressure on healthcare systems has created challenges in driving proactive discussions on financing for AMR efforts and in introducing the necessary governance structures to support NAPs.

Despite this, there are many examples of successful projects and programmes being implemented and creating change. Now, accelerated action is needed to prioritise delivery of NAP commitments, maximise resources efficiently, and ensure that activities are co-ordinated at a national level, particularly as most AMR NAPs have entered their 5th year.

KEY SOLUTIONS DISCUSSED

- **Cross-ministry engagement** – leveraging local data to engage ministers across sectors on the importance of action to tackle AMR and align their efforts. Embedding different ministries, with national level governance, into working groups and initiatives to tackle AMR on a united footing
- **Costing plans** – ensuring that all NAPs are clearly costed to allow for effective decision-making from ministers, leveraging the WHO budgeting tool as required
- **Aligning to existing political commitments** – showcasing how AMR measures support existing national priorities, including pandemic preparedness, health system strengthening, and building sustainable food systems
- **Regional collaboration** – sharing best practice and fostering joint activity to support efficient and sustainable solutions that are context-specific and culturally sensitive

CASE STUDIES

Building a cross-sector platform to design a One Health approach for AMR – *Zambia National Public Health Institute*

The different priorities and mandates across sectors are a frequent challenge when implementing One Health solutions to address AMR.

To build cohesion, the Zambia National Public Health Institute created a new platform where every sector nominated a dedicated focal point who would spearhead activities on AMR. These individuals however have other responsibilities. The ideal would be to have the role as a dedicated job with a functional secretariat, rather than the position forming part of a wider remit.

Representatives from across human health, animal health, environment, food, drug, and agriculture sectors were brought together through the initiative to understand respective challenges and opportunities for change across sectors.

Impact:

Through their collaborative One Health approach, the Zambia National Public Health Institute was able to prioritise and maximise resources – identifying sustainable and effective solutions that could be embedded into the country's National Action Plan on AMR.

Awareness materials have been developed for children, farmers, and healthcare professionals – and journalist engagement has also been conducted to encourage information dissemination. Another successful awareness activity has been university debates on AMR. This has in turn created an organisation called Youthful AMR Ambassadors for Zambia and garnered momentum against AMR.

Surveillance sites have expanded, which have seen benefit from surveillance infrastructure necessitated by the COVID-19 pandemic.

A draft policy document has been developed and piloting of stewardship has begun in selected healthcare facilities. Political will is no equivalent to financial commitment, but pushing AMR up the political agenda is vital to the cause.

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2. STRENGTHENING HEALTH INFRASTRUCTURE

Strengthening healthcare infrastructure, including diagnostics, access to vaccines and treatments, and infection prevention and control (IPC), is critical for tackling AMR. **Dr. Neema Kaseje, pediatric surgeon and public health specialist, commented:** *“AMR is a vicious cycle. The more fragile the healthcare system, the more misuse & overuse of antimicrobials, further weakening our ability to care for patients.”*

Stewardship of antimicrobials across sectors will form a critical part of activities to reduce AMR. However, access to essential antibiotics and vaccines is equally as important. The COVID-19 pandemic has clearly revealed the impact of lack of access to healthcare for vulnerable populations and highlighted pre-existing health inequities, as well as the critical importance of strengthening WASH and IPC measures globally. The AMR community must learn from these challenges and support calls for greater equity in global health.

Surveillance is also a critical part of many countries' activity to tackle AMR. High quality national data on AMR provides the evidence needed for a full understanding of the situation – not only informing appropriate action, but also helping to convince decisionmakers of the need for greater investment.

As countries put in place plans to strengthen future pandemic preparedness, these should include consideration of AMR as an urgent and serious threat, with measures such as enhanced surveillance and sequencing capabilities having a dual benefit. **Dr. Chikwe Ihekweazu, Assistant Director General at the World Health Organization, noted:** *“Global health is very much structured around disease-specific targets, and those targets drive action at the country level. We encourage countries to define their priorities and be brave in using strategies across the board – for example, we don't want a surveillance response that only focuses on COVID.”*

KEY SOLUTIONS DISCUSSED

- **Prioritisation** – focusing NAP activities on the areas that are most feasible and deliver quick results, including “best buys” for AMR like IPC and sanitation that are also linked to healthcare system strengthening
- **Stewardship** – implementing national stewardship policies in human health settings (particularly in primary care) as well as animal and agricultural sectors, considering how shared platforms can be used to provide advice and technical guidance
- **Building capacity through existing platforms** – making the case for integrating AMR measures into existing activities, such as TB surveillance or laboratory capabilities for sequencing COVID-19

- **Data standardisation and integration** – collaborating globally and nationally across sectors to standardise data and enable evidence generation, using inter-agency coordination to expand surveillance and integrate data from underrepresented areas like the environmental sector.

CASE STUDIES

Implementation of a One Health AMR surveillance system in Uganda, Malawi and Kenya - *Dr. Adrian Muwonge, University of Edinburgh*

The Fleming Fund supported project started as a pilot initiative, testing a One Health surveillance system in Uganda. It involved a two-way approach, with a hospital-initiated tracing system back into communities and a community-initiated system tracing back into the hospital.

The pilot brought together six fellows from across the One Health spectrum to gain a more detailed understanding of the requirements of inter sectoral initiatives.

Over the past three years, the team has built capacity in AMR diagnostics, Surveillance and Stewardship in both human and animal health. The team are now developing “blue-print” of how such a system can be implemented, as well as training material for future generations of professionals.

Based on the success of the pilot initiative, the approach is now being expanded to another 11 fellows from Uganda and Malawi, as well as a new cohort of policy fellows from Kenya.

Impact:

The program will have trained 19 experts by 2023. By working together as cohort within country and at regional level, this group will be equipped to support the delivery of National Action Plans.

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3. BUILDING A ONE HEALTH APPROACH

Tackling AMR will require a co-ordinated One Health approach, with measures spanning human health, animal health, food production and environment. The links between AMR and broader sectors, such as trade, education and finance are also important to note.

Competing priorities across different sectors is a key challenge for the effective implementation of a One Health approach, exacerbated by limited financial resource and human capacity dedicated to coordination. Many countries have an AMR focal point who is responsible for coordinating activity across ministries, but this is often not made a full-time job, and so positions are not adequately resourced or funded to fully deliver against what is needed.

Beyond recognition of the importance and value of a one-health approach, operationalisation of such an approach is a challenge in itself. Clear management and communication are critical for supporting effective multisectoral activities and overcoming practical challenges to implementation. *Jane Lwoyero, World Organisation for Animal Health (OIE), noted: “Since AMR is affecting multiple sectors there is a need for a One Health response. We have multisectoral collaboration when we deliberately coordinate action to achieve a shared goal. For this to be successful, we need political commitment, resources, a governance mechanism and practical management.”*

Given lack of resources, it is critical to identify synergies and ensure we capitalise on efforts made by all players. One example of an activity to address this gap is the AMR Multi-Stakeholder Partnership Platform that will bring together people from across sectors and disciplines, including academia, private organisations and governments. There are also opportunities to learn from cross-sectoral gains made against other global challenges, such as climate change.

KEY SOLUTIONS DISCUSSED

- **Resource dedicated to coordination** – acknowledging coordination as a valuable activity in itself and providing sufficient human and financial resource to facilitate cross-sector working will be essential
- **Establishing coalitions** – introducing measures such as NAP technical working groups with focal points from each sector, building in accountability structures
- **Multi-sector education programmes** – tailoring education programmes for different sectors, including veterinarians, animal farmers, and food producers
- **Incentivisation** – ensuring appropriate incentivisation and compensation schemes for each sector to support measures such as stewardship programmes

CASE STUDIES

Identifying sustainable solutions to reduce drivers of AMR in food production – *ReAct Asia Pacific*

The project aimed to gather information on the barriers to tackling AMR at provincial and local level and broke down India's National Action Plan to state-level, focusing on issues of antibiotic use in food production.

Through its work, the initiative noted that a lot of antibiotic misuse is unintentional. For example, small scale farmers are using poultry waste with antibiotic residue to feed their fish. These farmers do not have the money or the resources to install biosecurity measures.

ReAct also found that economic incentives are crucial to enact behavioural changes. For example, the European Union's rejection of consignments of shrimp due to levels of antibiotics led to the introduction of biosecurity measures.

The programme has found that the use of antibiotics in poultry production is widespread in India. The sector has few big suppliers, who provide hatchlings, technical and veterinary support. This means that local farmers often have little choice in the use of antibiotics for their livestock.

The programme developed several activities, including workshops for farmers and food producers to educate about AMR. ReAct is also seeking to strengthen relationships between local farmers and governmental bodies involved in regulation in veterinary and fishing sectors.

Impact:

Chicken and shrimp are inexpensive sources of protein in India, therefore solutions need to be found that meet the needs of a growing population and maintain farming in a sustainable way. Based on the findings of the project, ReAct is proposing solutions such as:

- A fund for compensation for farmers to cover any losses they incur by changing their antibiotic practices
- A global 'carbon credit'-like scheme to help reduce imbalance in antibiotic use in across the world
- Greater mobilisation of consumers to put pressure on large food producers

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4. INCREASING ENGAGEMENT ON AMR

Public awareness of the causes and potential impact of AMR is a critical success factor. **Otridah Kapona** from the **Zambia National Public Health Institute** noted: *"Awareness is the first step to action. People need to know that something is wrong to do something about it – we take every opportunity to raise awareness, with policymakers, children, for farmers, and the general public."*

Community engagement plays a vital role in supporting adherence to measures to reduce AMR. Core targets for engagement initiatives span the One Health sector, ranging from: those with an influence in the community, including youth advocates; healthcare professionals, including community health practitioners; and people working in agriculture. Tailoring education materials to individual needs and cultures is critical for success, taking into account the guidance of civil society and social scientists.

Broader public involvement in AMR activity not only supports individual responsibility, particularly around antibiotic consumption, but also supports efforts to gather citizen-generated data on AMR that can further inform national and local AMR response; for example, data on use of antibiotics or public perceptions of AMR. Public engagement in this issue also leads to greater pressure for action from both governments and commercial organisations such as food producers.

KEY SOLUTIONS DISCUSSED

- **Engaging youth** – developing youth education and advocacy programmes as a group central to future behaviours and with reach into wider communities, including engaging the next generation of healthcare and veterinary professionals
- **Public engagement** – building public facing campaigns on One Health practices to reduce AMR, integrating education for media on the topic to improve quality and accuracy of reporting
- **Integrate into cultural context** – seeking advice from local experts, civil society and social scientists to ensure that education programmes and communications campaigns are culturally sensitive and take local needs and customs into account
- **Engaging individuals across the One Health community** – working closely with representatives from agricultural, environmental and food production sectors to build awareness of the drivers and impact of AMR, highlighting relevance and role of their sector

CASE STUDIES

Collaborating with the agricultural sector to increase awareness on AMR in Ecuador - *AGROCALIDAD*

Targeting specific audiences, including veterinarians, cattle raisers, farmers, agricultural schools, and university students studying animal health, AGROCALIDAD has developed tailored content to educate audiences about the impact of AMR in animal health.

The programme targets small producers who are less likely to meet international standards in the use of veterinary drugs, pesticides, and fertilisers, to educate about antimicrobial resistance in livestock.

The content and key messages are tailored to the local communities and avoid the use of technical jargon. The initiative considers the ancestral traditions of the communities it works with and aims to build bridges between ancestral customs and modern science.

Impact:

Since 2015, the program has trained 43,521 farmers on good agricultural practices, with a new AMR module introduced in 2021 reaching a further 573 farmers.

In 2021, AGROCALIDAD reached 110 trained professionals on the appropriate veterinary products to use.

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For further information please contact contact@icars-global.org or AMRCallToAction@wellcome.org

CONFERENCE AGENDA

Day 1, Monday 15 November – Celebrating progress so far

Session 1 – Welcome & Keynote Address

Introducing the Call to Action, including key information on objectives, format, the co-hosts and discussing their priorities and commitment to addressing AMR.

Speakers:

- Flemming Møller Mortensen, *Minister for Development Cooperation, Denmark*
- Anutin Charnvirakul, *Deputy Prime Minister and Minister of Public Health, Thailand*
- Leonardo Arregocés Castillo, *Director of Medicines and Health Technologies, Ministry of Health and Social Protection, Colombia*
- Neema Kaseje, *pediatric surgeon and public health specialist*

Session 2 – Progress on AMR in review – what's changed since the 2018 Call to Action conference?

Discussing outputs and commitments from the last Call to Action conference, reflecting on changes in the global health landscape over the last 3 years and on key progress made since then, as well as next steps to move key issues forward.

Speakers and panellists:

- James Anderson, *IFPMA*
- Sally Davies, *UK Special Envoy on Antimicrobial Resistance*
- Liz Tayler, *WHO*
- Dechen Wangmo, *Minister for Health, Royal Government of Bhutan*
- Naomi Rupasinghe, *World Bank*
- Jonathan Wadsworth, *World Bank*
- Moderated by Ed Whiting, *Wellcome Trust*

Session 3 – Implementation of National Action Plans – progress and pioneers

Highlighting and celebrating National Action Plan (NAP) implementation progress around the world and promoting, learning and reflecting upon successful approaches that could be adopted in other countries.

Speakers and panellists:

- Otridah Kapon, *Zambia National Public Health Institute*
- Adrian Muwonge, *University of Edinburgh*
- Krang Sidonn, *Ministry of Health, Cambodia*
- Baritazar Stanley, *Roll Back Antimicrobial Resistance Initiative*
- Julia Fabara, *AGROCALIDAD*
- Satya Sivaraman, *ReAct Asia*
- Moderated by Amit Khurana, *Centre for Science and Environment*

Latin America regional session – Prioritisation of activities to deliver National Action Plans

Discussing prioritisation strategies and frameworks, sharing country experiences and identifying challenges and opportunities, as well as promoting and reflecting upon approaches that could be adopted in other countries.

Speakers:

- Pilar Ramon-Pardo, *Pan American Health Organization*
- Sandra Milena Corredor, *Ministry of Health and Social Protection, Colombia*
- Moderated by Gloria Cordoba, *ICARS*, and Nicolas Winter, *ICARS consultant*

Day 2, Tuesday 16 November – Levers for change

Asia Regional Session – Prioritisation of activities to deliver National Action Plans

Discussing prioritisation strategies and frameworks, sharing country experiences and identifying challenges and opportunities, as well as promoting and reflecting upon approaches that could be adopted in other countries.

Speakers:

- Scott Newman, *FAO*
- Melissa Guerrero, *Department of Health, Philippines*
- Moderated by Jyoti Joshi, *CDDEP*, and Emmanuel Early, *ICARS Consultant*

Session 4 – Ensuring action is informed by knowledge – tackling AMR through evidence and data

Discussing innovative approaches to generation of evidence and data and how they are being used to inform action, discussing how evidence and data can be made an integral component when implementing AMR NAPs.

Speakers:

- Aida Ivette Rojas Sabogal, *Colombian Agricultural Institute*
- Watipaso Kasambara, *Public Health Institute of Malawi*
- Karen Bett, *Global Partnership for Sustainable Development Data*
- Linus Olson, *Karolinska Institutet*
- Tim Rawson, *Imperial College London*
- Vikas Aggarwal, *Fleming Fund*
- Moderated by Raheelah Ahmad, *City University of London*

Session 5 – Plenary and Africa regional session – Prioritisation of activities to deliver National Action Plans

Discussing innovative approaches to generation of evidence and data and how they are being used to inform action, discussing how evidence and data can be made an integral component when implementing AMR NAPs.

Speakers:

- Anand Balachandran, *World Health Organization*
- Moderated by Mirfin Mpundu, *ReAct Africa*, and Esmita Charani, *Imperial College London*

Session 6 – Routes to effective One Health and cross-sector working

Sharing and discussing frameworks for how One Health can be operationalised, sharing experiences and lessons learnt on how countries have approached this concept and promoting approaches that could be adopted in other countries.

Speakers:

- Jane Lwoyero, *World Organisation for Animal Health*
- Peter Sogaard Jørgensen, *Stockholm Resilience Centre*
- Julaporn Srinha, *Ministry of Agriculture and Cooperatives, Thailand*
- Moderated by Anders Dalsgaard, *University of Copenhagen*.

Day 3, Tuesday 17 November – Wider opportunities and ambitions

Session 7 - Empowering new agents for change - partnerships & coalitions to accelerate action on AMR

Identifying opportunities to strengthen AMR sensitive approaches that accelerate progress and engaging with global and regional stakeholders providing a fresh outlook on AMR and who can share lessons learnt from other cross-cutting initiatives and programmes in global health.

Speakers:

- Aboubacar Kampo, *UNICEF*
- Sade Ogunsola, *Infection Control Africa Network*
- Patrick O'Carroll, *The Task Force for Global Health*
- Moderated by Sabiha Essack, *University of KwaZulu-Natal*

Breakout discussions moderated by:

- Philip Mathew, *ReAct Asia*
- Caline Mattar, *Washington University in St. Louis*
- Renuka Gadde, *Clinton Health Access Initiative*
- Lindsay Denny, *Emory University*

Session 8 - Learning from the Covid-19 pandemic to inform the AMR response

Taking stock of the current global health landscape, reviewing the impact of the pandemic on the AMR situation and response, exploring learnings from the Covid-19 response that can be applied to AMR action at global and national levels and considering how governments can reprioritise their investments in One Health to address the needs of competing agendas, including AMR.

Speakers:

- Jeremy Farrar, *Wellcome Trust*
- Chikwe Ihekweazu, *World Health Organization*
- Devi Sridhar, *University of Edinburgh*
- Manica Balsegaram, *GARDP*
- Maria Guevara, *Médecins Sans Frontières*
- Monika MacDevette, *UNEP*
- Arshnee Moodley, *International Livestock Research Institute*
- Kamini Walia, *Indian Council of Medical Research*
- Moderated by Kate Dodson, *UN Foundation*

Session 9 – Wrap up & close of the conference

Sharing perspectives and commitments from co-hosts on key next steps to accelerate progress on AMR and summarising discussions and key meeting themes, highlighting actions for co-hosts and delegates to take forward.

Speakers:

- Helle Engslund Krarup, *International Centre for Antimicrobial Resistance Solutions*
- Magnus Heunicke, *Minister of Health, Denmark*
- Kwaku Agyeman-Manu, *Minister for Health, Ghana*
- Budi Gunadi Sadikin, *Minister of Health, Indonesia*
- Makozo Chikote, *Minister of Fisheries and Livestock, republic of Zambia*
- Lianne Gonsalves, *World Health Organization*