Event Report

Bridging Science,
Advocacy, and Practice:
A Unified Approach to
Combating
Antimicrobial
Resistance

March 24, 2025

Event code: W31 AMR



About this report

This report presents the key findings and discussions from the hybrid event "Bridging Science, Advocacy, and Practice: A Unified Approach to Combating Antimicrobial Resistance (AMR)," organized by the Infectious Disease Alliance (IDA) and Statens Serum Institut (SSI) on March 24, 2025. The event's keynote speakers emphasized the need to discuss the alignment between science, advocacy, and practice to tackle AMR effectively, safeguarding the health of humans, animals, and the environment for generations to come. The discussion also covered calls upon stakeholders to take urgent, unified action to combat the global threat of AMR and the need to act on promoting AMR prevention, robust national and international policies that enforce antimicrobial stewardship, and enhanced support for research, innovation, and public awareness campaigns.

The event featured insights from Dr. Kristian Møller, Director of Veterinary & Quality Services at Danish Agriculture & Food Council, Cóilín Nunan, Policy and Science Manager at Alliance to Save Our Antibiotics, Dr. Dominique L. Monnet, Head of Antimicrobial Resistance & Healthcare-Associated Infections (ARHAI) Section at European Centre for Disease Prevention and Control (ECDC), Dr. Chantal Morel, Health Economist at KPM Center for Public Management, University of Bern, Dr. Danilo Lo-Fo-Wong, Regional Advisor/Programme Manager, Control of AMR at World Health Organization (WHO) European Region, Dr. Andrea Caputo Svensson, Global Health Advisor at ReAct – Action on Antibiotic Resistance, Prof. Kim Lewis, University Distinguished Professor & Director of the Antimicrobial Discovery Center at Northeastern University, and Dr. Ute Wolff Sönksen, Head of Danish program for monitoring of antimicrobial resistance and antimicrobial consumption (DANMAP) at SSI.

This report is structured to reflect the core themes discussed during the hybrid event. It includes an overview of the event's objectives along with key takeaways from the presentations. Additionally, it highlights engagement metrics and provides actionable recommendations for policymakers and stakeholders working to fight against AMR. This report serves as a resource to drive sustained impact and empower stakeholders to take meaningful action against AMR globally.

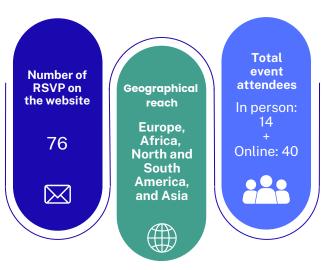
This event report was compiled by: Carl Aryan, Committee Management Lead, IDA



WHO Europe

Introduction

The Infectious Disease Alliance (IDA) and Statens Serum Institut (SSI) co-hosted a hybrid event titled "Bridging Science, Advocacy, and Practice: A Unified Approach to Combating Antimicrobial Resistance (AMR)," taking place in Jernesalen, SSI Campus, Copenhagen, Denmark, and online via Teams on Monday, March 24, 2025. This event brought together global experts, policymakers, researchers, and advocates to explore collaborative approaches for addressing AMR as a growing global challenge that cuts across human health, animal health, agriculture, and the environment. This event highlighted the need for a unified, cross-sectoral approach—emphasizing the importance of the One Health framework—to address AMR.

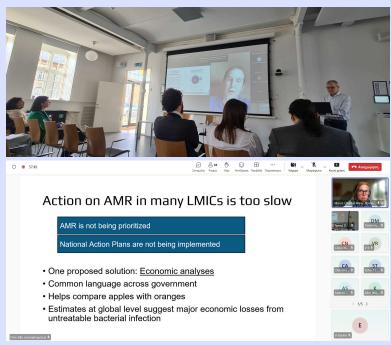


Background on Antimicrobial Resistance (AMR)

Antimicrobial resistance (AMR) is a growing global health threat that cuts across human health, animal health, agriculture, and the environment. This worldwide crisis is rendering common infections harder to treat and undermining advances in medicine with resistant pathogens increasingly outpacing the discovery of new antibiotics. Traditional antibiotic discovery methods, which relied on screening environmental isolates, have largely failed to produce novel antimicrobial classes in the past 30 years. Driven by factors like overuse of antibiotics and poor infection control, AMR demands urgent action through strengthened stewardship and global cooperation to prevent a post-antibiotic era.

The objectives of the event

- Foster Multisectoral Collaboration: Bring together experts and stakeholders from various sectors—including human health, animal health, agriculture, and the environment—to promote a One Health approach for addressing AMR.
- Raise Awareness on AMR's Global Impact: Highlight the urgency of AMR as a growing global challenge and its impact across sectors to mobilize international attention and resources.
- **Promote Evidence-Based Advocacy:** Showcase scientific advancements and policy initiatives to inform and inspire evidence-based advocacy for AMR mitigation strategies.
- Empower Key Stakeholders: Provide a platform for healthcare professionals, veterinarians, agricultural experts, and environmental advocates to share best practices and innovative solutions for responsible antimicrobial use.
- Facilitate Cross-Sectoral Dialogue: Enable meaningful exchanges between global civil society organizations (CSOs), non-govermental organizations (NGOs), foundations, and other stakeholders to enhance synergies and avoid duplication in addressing AMR.
- Commit to Sustainable Solutions: Advocate for long-term, integrated approaches to AMR prevention and control, emphasizing sustainability in public health, animal husbandry, agriculture, and environmental practices.



Summary & key takeaways of the webinar

Dr. Kristian Møller, Director of Veterinary & Quality Services at the Danish Agriculture & Food Council Topic: Antibiotics and resistance in Danish pigs

- Denmark produces approximately 30 million pigs annually, with 50% exported at 30 Kg. Also, 85% of the produced pig meat is exported. Despite low antibiotic use compared to Europe, challenges persist.
- VetStat and the Yellow Card system help monitor and regulate antibiotic use in pig farming.
- Post-2022 EU ban on zinc oxide in weaning pigs increased aminoglycoside use and resistance.
- Highlighted the need for better surveillance, diagnostic tools, and policy flexibility.
- Recommended best practice sharing based on data analytics and productivity metrics.

Key Takeaways:

- Strong data systems (e.g., VETSTAT) are crucial for real-time monitoring.
- Collaborative governance is necessary to achieve targeted reductions (e.g., an 8% reduction goal by 2027).

For a more immediate impact, LFG will launch several measures to support the goal of reducing mass treatments and instead focus on targeted treatment of sick animals

- •Conduct herd studies to analyze farms with low treatment needs, identifying successful practices that can be shared across the industry.
- •Develop Best Practice Guidelines, such as a "Manual for Proper Antibiotic Use," based on herd studies, existing data, and experiences from previous zinc projects.
- Conduct studies on vaccine effects on antibiotic treatment, focusing on E. coli and Lawsonia.
- Investigate productivity in herds with minimal diarrhea problems and, consequently, low treatment needs, comparing the costs of preventive measures with the costs of diarrhea.
- •Launch a campaign to increase interest in more accurate diagnoses in herds with post-weaning diarrhea, leading to more precise treatments.



Cóilín Nunan, Policy and Science Manager at Alliance to Save Our Antibiotics Topic: Next steps for reducing European farm antibiotic use

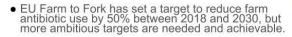
- Farm antibiotic use is directly linked to resistance to human infections.
- Provided evidence from MRSA, Campylobacter, and E. coli outbreaks.
- Discussed the 2022 EU regulation banning routine and prophylactic group use of antibiotics.
- Advocated for species-specific targets, reduction in group treatments to 30%, and improved animal husbandry.

Key Points:

- Despite regulatory progress, group treatments remain high (85% of EU antibiotic use).
- Healthier breeds, better hygiene, and delayed weaning (to 35–40 days) can reduce AMR.



Stronger targets for reducing farm antibiotic use are needed



- In March 2025, EMA will publish first EU report providing data on antibiotic use by farm-animal species.
- Alliance to Save Our Antibiotics advocates for stronger targets, using the new species usage data:
- reduce farm antibiotic use to 30 mg/PCU in each species, and to 15 mg/PCU in longer term.
- reduce group treatments to 30% of farm antibiotic use from 85% in 2022.

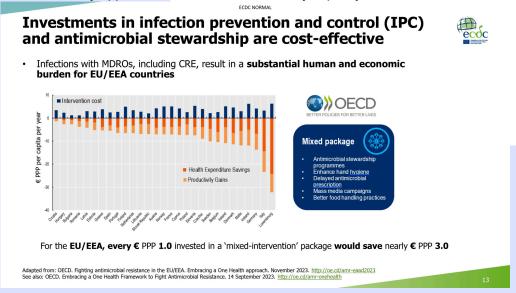


Dr. Dominique L. Monnet, Head of Antimicrobial Resistance & Healthcare-Associated Infections (ARHAI) Section at the European Centre for Disease Prevention and Control (ECDC)
Topic: Carbapenem-resistant Enterobacterales (CRE): ECDC rapid risk assessment, third update

- Highlighted an increase in carbapenem-resistant Klebsiella pneumoniae bloodstream infections by 60% since 2019.
- Emphasized risk of CRE spread via international patient transfers and high-risk hospital environments.
- Urged improved genomic surveillance, rapid diagnostics, and appropriate antimicrobial stewardship.
- Presented <u>ECDC's Rapid Risk Assessment</u> findings and action recommendations.
- Highlighted OECD findings that investments in infection prevention and control (IPC) and antimicrobial stewardship are cost-effective

Recommendations:

- National CRE management teams and dedicated action plans.
- Enhanced infection prevention controls and genomic-based outbreak tracing.
- Increased access to newly approved antibiotics and laboratory capacity.



Dr. Chantal Morel, Health Economist at KPM Center for Public Management, University of Bern Topic: Conceptual challenges in the use of economics to support action in AMR

- Few low and middle income countries (LMICs) are implementing AMR national action plans.
- Global economic models fail to resonate locally due to focus on bacterial AMR and limited relevance to broader infectious disease burdens.
- · Proposed reframing the discussion around "treatability of infectious diseases."
- Advocated for localized economic modeling and Global Fund-style technical support for funding access.

Strategic Insight:

- Shift from biological AMR framing to treatability allows for broader systems-based interventions.
- · WASH, diagnostics, and stewardship benefit not only AMR but overall public health.





Dr. Danilo Lo-Fo-Wong, Regional Advisor/Programme Manager, Control of AMR at World Health Organization (WHO) Europen Region

Topic: Roadmap on antimicrobial resistance for the WHO European region - From evidence to action

- Shared the AMR Roadmap and AMR Compass developed for 53 European member states.
- · Principles: One Health, people-centeredness, equity, and systems thinking.
- Outcomes: Prevention, control, treatment.
- Emphasized interactive tools, personal stories, and country examples to drive implementation.

Features of the Roadmap:

- 53 evidence-based interventions.
- Enabling areas: governance, lab systems, surveillance, workforce.
- Advocacy tools linking AMR to cancer, food safety, climate, etc.

The AMR Roadmap (2023 – 2030) and The AMR Compass

Diagnostic tool to:

- Assess national AMR capacity
- ✔ Identify national priorities
- Set national targets
- Implement evidence-based interventions
- Monitor and evaluate progress



Dr. Andrea Caputo Svensson, Global Health Advisor at ReAct – Action on Antibiotic Resistance Topic: Sustainable access to effective antibiotics – an End-to-End approach to R&D

- Emphasized the "access without excess" principle.
- Called for better alignment of R&D with LMIC needs and sustainable financing models.
- Highlighted milestone-based funding (e.g., \$24–46 million) as more efficient than billion-dollar pull incentives.
- Pointed to environmental risks from poor manufacturing oversight and lack of tech transfer.

Key Message:

- Public and not-for-profit models are more viable for global antibiotic access.
- Stewardship must accompany R&D to ensure long-term effectiveness.

Take home messages

Global Collaboration is Essential
 Addressing antibiotic resistance requires coordinated efforts across science, advocacy, and practice, with
 strong global partnerships and public leadership to ensure equitable access to effective antibiotics.

2. Sustainable Funding and Innovation

Long-term, predictable funding is critical to overcoming scientific and structural challenges in antibiotic R&D, particularly in the early stages, to preserve expertise and avoid costly downstream failures.

3. Equitable Access and Responsible Use

A balanced approach of "access without excess" is needed to ensure antibiotics are available where needed while preventing misuse, with a focus on strengthening healthcare systems and supporting LMICs.

4. Rethinking Incentives

Current incentive models have failed to stimulate antibiotic innovation; smaller milestone prizes and public/not-for-profit models offer more cost-effective and sustainable solutions to stimulate antibiotic innovation.

5. A Shift Toward Local Ownership

Moving beyond a "Global North-first" approach is essential. Strengthening regional institutions, fostering local leadership, and promoting equitable global partnerships can enhance antibiotic development and access

Prof. Kim Lewis, University Distinguished Professor & Director of the Antimicrobial Discovery Center at Northeastern University

Topic: The Origin of the AMR Crisis and the Path Forward

- Recounted the decline of the golden age of antibiotics and need for renewed basic research.
- Presented new tools like the iChip for culturing previously unculturable microbes.
- Urged investment in resolving the scientific bottlenecks and early-stage antibiotic discovery.

The nature of the AMR crisis: the lack of a reliable discovery platform

The bottleneck is in discovery

The main challenges are scientific:

- · Efficient access to uncultured bacteria
- · Identifying attractive taxonomic groups for antibiotic discovery
- Efficient metagenomic screening based on environmental DNA
- . Turning on silent operons/turning up production
- Computational prediction of structures from BG
- · Rules of penetration
- Single-cell based ultra-high-throughput screening
- · Rapid structure determination
- Efficient compound isolation
- · Efficient synthesis of analogs

Dr. Ute Wolff Sönksen, Head of Danish program for monitoring of antimicrobial resistance and antimicrobial consumption (DANMAP) at SSI

Topic: DANMAP – AMR and Antimicrobial consumption (AMC) surveillance in Denmark: Delivering data for policies and decision-making

- Presented Denmark's DANMAP system as a model for integrated AMR surveillance across human, animal, and food sectors.
- Highlighted real-time genomic and phenotypic data for outbreak tracking and national/EU reporting.
- Raised concern over antibiotic overuse in nursing homes and shortages of essential off-patent drugs.
- Called for improved sampling and use of laboratory methods and diagnostics and early warning systems, building on pandemic-era progress.

Highlights:

- Denmark sets a benchmark for transparency and rapid AMR response.
- Emphasis on public health preparedness and cross-sector coordination.
- Tools like EpiLinks and whole genome sequencing strengthen surveillance and outbreak control.

Gaps and problems pointed out by DANMAP in recent years



Shortages in old off-patented antibiotics will turn into a major problem if we don't react

Increasing levels of resistance within the human health sector demand focus

Antibiotics are a common resource for both animal and human sector and should be treated as such

Intensified hospital activities and food production may lead to higher rates of transmission but also raise the question of the environment acting as reservoir



Question and Answer (Q&A) Session

Discussion on Zinc Usage in Agriculture:

One notable inquiry, posed by Dr. Chantal Morel to Dr. Kristian Møller, addressed the use of zinc in pig farming, its prohibition, and the potential for reintroduction in Denmark. Dr. Møller noted that antibiotic use has increased in zinc's absence. Research at Aarhus University is exploring reduced zinc use—especially small doses at weaning and less in older pigs—which could cut antibiotic use by up to 40%. He emphasized the need for further trials and ongoing discussions to mitigate environmental impact.

Integrating Sepsis into AMR Plans:

A participant raised concerns about sepsis often being left out of AMR national action plans. Dr. Danilo Lo-Fo-Wong responded that sepsis is gaining global attention, especially after the World Health Assembly adopted a Global Action Plan on Sepsis last year. He highlighted overlaps with other under-addressed issues like fungal resistance and TB, stressing the need to include sepsis more prominently within the broader AMR agenda.



Plan for continued engagement

IDA is committed to fostering ongoing collaboration and action beyond the event, ensuring sustained momentum in the fight against AMR. The following steps outline our plan for continued engagement:

- 1. **Follow-Up Communication:** Participants received a post-event communication package, including the event report, call to actions, and access to recorded session, ensuring they remain informed and equipped to implement the discussed strategies.
- 2. Stakeholder Network Development and working group on AMR incentives: We will create a dedicated online platform or forum to connect participants and stakeholders, facilitating ongoing dialogue, knowledge sharing, and cross-sectoral partnerships.
- 3. Periodic Webinars and Workshops: IDA will host follow-up events, such as webinars and workshops, to revisit key topics, share progress updates, and provide a platform for stakeholders to present new developments or challenges.

Together, we will ensure the fight against AMR remains a priority across all sectors. IDA remains committed to fostering inclusive dialogue and actionable solutions in global health.

Click here to watch the recording of the event



Call to action

A Unified Approach to Combating Antimicrobial Resistance

Dear Global Health Leaders, Policymakers, and Advocates,

Antimicrobial resistance (AMR) is one of the most pressing global health threats of our time, endangering modern medicine, food security, and environmental health. The **Infectious Disease Alliance (IDA)** invites policymakers, scientists, healthcare professionals, industry leaders, and civil society to take decisive, unified action against AMR.

On **March 24, 2025**, experts at the AMR Hybrid Event discussed innovative, cross-sectoral strategies that reinforce the **One Health approach**—integrating human, animal, and environmental health solutions to combat AMR.

The Crisis at Hand

AMR is an escalating global crisis that threatens to undo decades of progress in modern medicine. AMR is a complex issue that requires a **One Health approach**, integrating actions across human, animal, plant, and environmental health sectors to achieve sustainable solutions. Without urgent intervention:

- Drug-resistant infections could cause 10 million deaths annually by 2050.
- Overuse and misuse of antimicrobials in human health, animal agriculture, and environmental contamination exacerbate resistance.
- Innovation in new antibiotics is stagnant, hindered by broken economic incentives and market failures.
- Low- and middle-income countries (LMICs) struggle with equitable access to effective antimicrobials, worsening global health disparities.

World leaders have committed to reducing global deaths associated with bacterial AMR by **10% by 2030**, as outlined in the 2024 UNGA Political Declaration. To accelerate action and increase impact, we must **act now**.

IDA's Call to Action

IDA urges governments, industries, healthcare professionals, researchers, and civil society to adopt concrete, evidence-based measures that align with the One Health framework. Our targeted recommendations include:

1. Policymakers, Governments, & European Commission:

- ✓ Transition from market-driven exclusivity models to milestone-based funding and pulling incentives that reward innovation at critical R&D stages.
- ✓ Establish a **cross-country pull** incentive framework, balancing push and pull incentives with predictable, sustainable funding.
- ✓ Foster public-private partnerships (PPPs) and new discovery platforms that integrate knowledge-based drug discovery approaches to overcome permeability barriers in bacterial cells.
- ✓ Promote **global collaboration strategies** to ensure incentives align with international efforts to make antimicrobials accessible and sustainable.
- ✓ Ensure that incentives are **linked to the global availability of new antimicrobials at a fair price**, particularly in LMICs.
- ✓ Involve civil society as a key actor in implementing sustainable antimicrobial use, promoting hygiene practices, and supporting infection prevention through awareness, education, and capacity building.

2. Healthcare & Veterinary Professionals:

- ✓ Implement and advocate for **strict antimicrobial prescribing guidelines** to minimize overuse and misuse.
- ✓ Promote **rapid diagnostic tools** to ensure targeted treatment and reduce unnecessary antibiotic consumption.
- √ Train and educate practitioners on responsible antibiotic use and emerging AMR threats.
- ✓ Strengthen Infection Prevention and Control (IPC) and Good Hygiene Practices (GHP) in healthcare and veterinary settings to reduce infection rates and minimize antimicrobial use.



3. Farming Industry:

- ✓ Emphasize the importance of a systems-oriented approach in AMR management, considering environmental impacts (emission control), animal welfare, and animal health/reduced antimicrobial usage.
- √ Focus on the security of supply to maintain consistent access to antimicrobials in LMICs.
- ✓ Improve animal husbandry practices to reduce the need for antibiotics, emphasizing preventive healthcare and biosecurity.
- ✓ Facilitate national coordination and collaboration between authorities, industry, and academic institutions to ensure cohesive AMR strategies.

4. Pharmaceutical & Biotech Industry:

- ✓ Invest in **novel antimicrobial discovery**, supporting **milestone-based funding models** rather than market exclusivity incentives.
- ✓ Commit to equitable pricing strategies that prioritize access in LMICs without compromising innovation.
- ✓ Collaborate with governments and international organizations on **public-private partnerships** for sustainable antibiotic development.

5. Researchers & Academic Institutions:

- ✓ Expand research into alternative therapeutics, including phage therapy, microbiome-based treatments, and Al-driven drug discovery.
- ✓ Address Gram-negative bacterial permeability barriers, a key obstacle in antibiotic efficacy.
- ✓ Advocate for global, open-access research initiatives to accelerate AMR solutions.

6. Civil Society & Advocacy Groups:

- ✓ Mobilize public awareness campaigns to **educate communities on antibiotic misuse and infection** prevention.
- ✓ Engage in policy advocacy to ensure governments prioritize AMR in global health strategies.
- ✓ Strengthen **grassroots initiatives** promoting responsible antibiotic use in agriculture and community health programs.

Time is Running Out. Act Now!

The fight against AMR demands urgent, collective action. Each stakeholder plays a vital role in **securing the future of medicine**. By signing this **Call to Action**, you pledge to support policies, investments, and initiatives that drive sustainable solutions against AMR.

50 Join the Movement:

- Sign the Call to Action—demand stronger AMR policies and global investment.
- Support research and innovation—advocate for new funding models in antimicrobial R&D.

Together, we can **bridge science**, **advocacy**, **and practice** to combat AMR and safeguard global health.

Click here to sign the call to action

IDA thanks all speakers, participants, and partners for their contributions to this insightful discussion. By working together, we can drive meaningful change in global health and combat AMR effectively.

