ICARS and Science for Africa Foundation

Workshop Report on the Outputs of the Round Table Workshop (RTW) on Knowledge Translation (KT) for the Mitigation of Antimicrobial Resistance (AMR) in Low-and-Middle-Income Countries

4th December 2024

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ICARS and Science for Africa Foundation sincerely thank the participants of the Round Table Workshop for their valuable contributions and active engagement throughout the exercise and the participant electronic review round. Your insights and inputs are greatly appreciated.

The ICID Congress in Cape Town, South Africa (December 2024) gave ICARS and Science for Africa Foundation an opportunity to connect with experts in research, policy, implementation, and funding to garner their input on a key AMR issue in LMICs:

Why existing knowledge translation tools and resources are not effectively leveraged to translate evidence-based interventions and solutions to mitigate AMR into policy, programs, and practices or integrated into systems for sustainable impact.

The three-hour RTW adopted a participatory and collaborative facilitation approach to achieve the three main goals (Box 1).

Box 1 Goals of the RTW

The RTW used a collaborative process to achieve three main objectives:

1. To understand why current knowledge translation tools and models are not achieving the desired impacts, particularly in LMICs.
2. To discuss how to update, adapt or create new resources specifically tailored to translating AMR knowledge.
3. To explore participants' interest in building a network of stakeholders to bridge the gap between science and policy in AMR in LMICs.

Background

Antimicrobial Resistance (AMR) is a growing global health threat with particularly severe effects in low- and middle-income countries (LMICs), negatively impacting poverty reduction, food security, health and well-being and inequality reduction (Ho et al., 2024; Tang et al., 2023; The World Bank Group, 2021).

Addressing AMR in LMICs requires urgent One Health mitigation actions for reducing AMR-related morbidity and mortality in human and animal health, the prudent use of antimicrobials in humans, animals and plants and their responsible disposal into the environment by 2030 (Joshi et al., 2021; Naghavi et al., 2024; The World Bank Group, 2021; Anderson et al., 2024).

Despite extensive scientific evidence and research, the translation of existing knowledge into actionable policies, programmes and practices as well as knowledge integration into systems remain a challenge (Rogers Van Katwyk et al., 2020). While research evidence and tools to address AMR exist, they lack contextual relevance to LMICs (Ledingham et al., 2019; World Health Organization, 2024).

What do we mean by tools for addressing AMR?

The World Bank Group landscape analysis of tools to address AMR defines tools as "*frameworks, guidelines, documents, and implementation strategies and similar mechanisms*

that aim to support government in developing policies and implementing programs that address AMR"(The World Bank Group, 2021, p.5).

The landscape review of tools for AMR identified 90 tools across several domains, including: 1) raising awareness, 2) promoting antimicrobial stewardship, 3) conducting surveillance, 4) preventing and controlling infections in both human and animal health, 5) reducing the spread of pathogens in the environment, and 6) developing a national research agenda. Although the tools were developed to be adapted, only six tools were developed for LMICS (The World Bank Group, 2021).

Tools for mitigating AMR encourage countries to adopt a step-by-step approach to tackling antimicrobial resistance (AMR) tailored to each country's unique needs, contexts, and available resources but do not provide sufficient guidance for translating available evidence-based AMR mitigation strategies, interventions and solutions, i.e. knowledge into actionable policies and practices in different contexts (The World Bank Group, 2021). Additionally many AMR mitigation tools and research evidence primarily originate from academic sectors in the Global North and may not consider the deeper social, cultural, and economic factors shaping health, agricultural and environmental management systems in the Global South (Ledingham et al., 2019; Tang et al., 2023).

What do we mean by knowledge translation in the AMR context?

Knowledge translation (KT) is a dynamic process embedded within the specific country/context that will ultimately apply the knowledge. Relating to AMR, knowledge translation is the exchange, synthesis, and ethically sound application of AMR knowledge within a complex network of interactions between researchers and users (policymakers) in a particular country/context. The goal is to accelerate the application of research benefits to improve health, create better services and products, and strengthen the One Health system of that country/context (adapted from: Canadian Institutes of Health Research, 2016).

What is the issue?

The gap between science and policy for AMR mitigation is particularly evident in LMICs, where the burden of AMR is high, and resource constraints contribute to the complexity of addressing AMR effectively. There is a clear need for a more focused enquiry on why existing knowledge translation tools and resources are not effectively leveraged to translate AMR knowledge into policy, programmes and practices, nor integrated into LMIC systems for sustainable impact.

In the words of one roundtable participant: Integrating AMR science into policy and practice in LMICs requires a paradigm shift requiring a deep appreciation of the specific science-policy context and collaborative

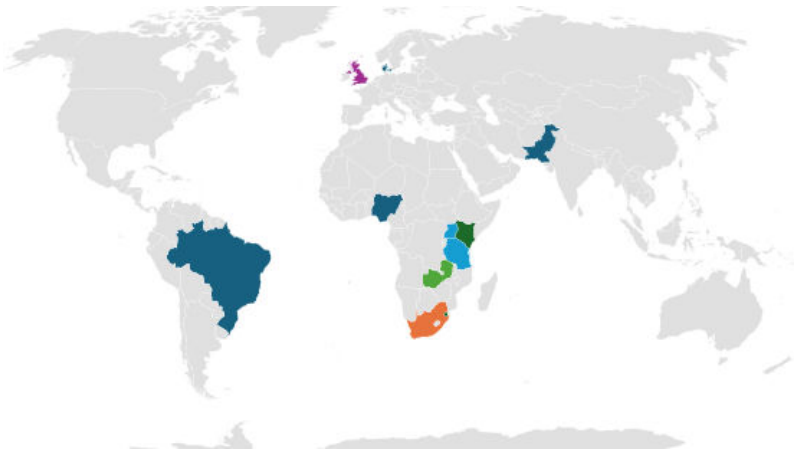
engagement with One Health stakeholders to implement AMR knowledge for their contexts (Essack, 2024; Khurana et al., 2023). A key aspect of this paradigm shift is understanding the local social, cultural, and economic factors influencing a One Health approach. This shift also involves leveraging the strengths of a country's health, agricultural, and environmental practices while prioritizing the research and voices and expertise of local knowledge holders to use/adapt knowledge translation (KT) tools for implementing antimicrobial resistance (AMR) evidence into practice, thereby supporting both local and global AMR mitigation efforts sustainably (Khurana et al., 2023; Ledingham et al., 2019; Mitchell et al., 2022; The World Bank Group, 2021).

Implementation science and stakeholder engaged knowledge translation are powerful tools for transforming research into practical action. Implementation research (IR) aims to understand how, why, in what context, and for whom antimicrobial resistance (AMR) interventions are effective in real-world settings (Khurana et al., 2023; Wu et al., 2022). While uses both and qualitative methods validate processes that facilitate or impede the sustainable adoption of evidence-based AMR practices, knowledge translation is concerned with applying KT methods and tools to facilitate end-user knowledge uptake; that research evidence effectively informs policy and routine practice (Khurana et al., 2023).

Participants

ICARS and Science for Africa Foundation invited researchers, funders, policymakers and members of community organisations attending the ICID Congress to participate in the three-hour RTW.

Thirty-three (33) experts in AMR from eleven (11) countries including 9 LMICs, participated in the RTW from Universities, Research Institutes, Government Sectors (Health and Veterinary), Hospitals, Funding Organisations, Global and Regional Networks, and Associations. Please see the Participant List in Appendix 1.



Brazil	1
Denmark	1
Eswatini	4
Kenya	4
Nigeria	1
Pakistan	1
South Africa	9
Tanzania	2
Uganda	2
UK	5
Zambia	3

Process

Card-storming is a facilitation method that promotes rapid and structured idea generation through clear rules of engagement (Box 2). We invited participants to contribute their ideas on physical cards in response to two stimulus questions related to the objectives (Box 3).

The success of this approach relied on careful preparation, sharp and focused questions to guide discussions, a well-structured agenda, and engaging facilitation. Together, these elements created a dynamic and inclusive environment for generating meaningful and mutually owned ideas.

Box 2 Rules of engagement

The rules of engagement ensure every voice is heard and equally valued, with ideas becoming shared property once released.

Facilitation fosters a collaborative environment for mutual ownership of ideas, encouraging openness and creativity and recognizing all contributions as essential to shaping the knowledge outputs.

The process is fast and engaging, prioritizing content over talk, free-thinking, active participation, and anonymity during idea generation.

The facilitators and participants grouped similar cards together visually representing collective knowledge for each question. After that, participants organised the rich and varied content into meaningful categories for further clarification and decision-making.

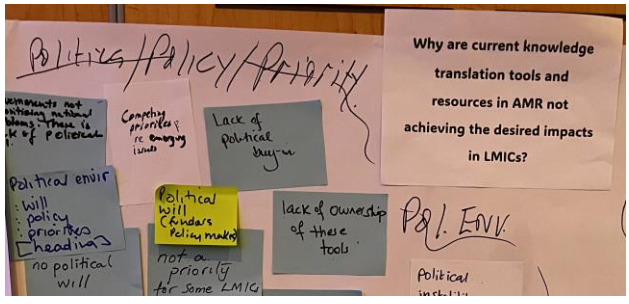
After the workshop, the facilitators gathered the content from the boards (illustrated below), conducted a thematic analysis for each question, and drafted key takeaway messages to summarize the outputs.

The document was then shared with participants for comments, clarifications, and additions. Any additional information included in the report, clearly indicates that it originates from the comment round.

Box 3 Stimulus questions

Question 1 Why are current KT tools and resources in AMR not achieving desired Impacts in LMICs?

Question 2 What needs to happen for AMR knowledge translation tools and resources to be implemented in LMICs?



Note for readers

1. The analysis is based on participant inputs only.
2. Not all content for each question was included in the analysis because some items require more "unpacking" for clarity. Omitted items are asterisked.
3. The authors have threaded One Health throughout the document.

1. Why are current KT tools and resources in AMR not achieving the desired impacts in LMICs?

Section 1.1 Table 1 presents the co-developed themes and verbatim inputs explaining why LMICs are not effectively translating existing knowledge on antimicrobial resistance (AMR) mitigation into policy and practice. For a complete list of outputs addressing this question and a visual of the content cards, refer to Appendix 1. Section 1.2 provides a narrative synthesis of the key reasons why LMICs face challenges in implementing AMR mitigation strategies into actionable policy and practice. **Asterisked items indicate that the content requires further unpacking to be integrated into the analysis.*

1.1 Co-developed themes and participant outputs

Table 1 Why are LMICs not translating existing knowledge on AMR mitigation into policies and practices?

Theme	Outputs
Whose Knowledge (overarching)	• Intellectual bias about the value of different forms of knowledge. • For whom and with whom is knowledge being developed and translated? • Are we asking the right people the right questions? • Does knowledge generation and translation take social and cultural realities into account?
Political Environment: Will, Priorities, and Policies	• Lack of political will or buy-in. • Policymakers unaware of AMR. • Misalignment with country plans. • Competing priorities in LMICs for example remerging health conditions. • AMR not "LOUD" enough as a threat compared with other infectious diseases.
Financial Resources/ Financing	• Inadequate funds for sustainability. • Resource constraints in LMICs. • (Mis)conceptions about the costs of implementation*
Context, Co-Creation	• Limited stakeholder engagement and co-creation. • Lack of ownership of tools and resources. • Most tools speak to the global north contexts. • Tools not adapted to local socio-economic or cultural and language contexts. • Difficulty in interpreting AMR terminologies into local languages. • Tools written by academics, inaccessible to end-users.
Communication	• Poor dissemination strategies. • Gaps in communicating research results to policymakers and public in easy terms/messages.
Visibility and Awareness	• Many potential users unaware of KT tools. • The tools are not reaching the policymakers and other potential users. • Where do we/they find the tools. • Overwhelming number of tools.
Capacity for Implementation	• No clear implementation guidelines. • Lack of clarity on how to use tools. • Gaps in knowledge transfer and expertise among users.

Funder Alignment*	• Funder objectives usually predefined and not easily influenced by local needs.* • Lack of collaboration among funders.* • Difficulties in ensuring sustainability after funded projects completed.
Monitoring and Evaluation (M&E)*	• Absence of robust M&E frameworks.* • Lack of accountability for implementers.* • Difficulty in tracking and adapting KT tool outcomes.*

1.2 Synthesis of explanations

The use of current KT tools and resources in AMR mitigation efforts face several barriers to achieving impact in LMICs.

i. **AMR is not prioritised** within some LMICs nor aligned with national strategies. It is not perceived as a "loud" threat when balanced against more visible threats such as emerging and re-emerging communicable and non-communicable diseases. There is thus insufficient political will or buy-in for prioritising AMR which precludes the translation of existing AMR-mitigation knowledge into policy and practice and their integration into health, agricultural and environmental management (One Health) systems.

ii. **There is low visibility and awareness of existing AMR mitigation strategies, interventions and solutions and even lower visibility of the knowledge translation tools** in some LMICs. Where AMR mitigation and KT tools exist poor dissemination strategies limit their reach and uptake among policymakers and the health, agricultural and environmental management workforce.

iii. **Most existing AMR mitigation tools speak to Global North** One Health realities and do not resonate with the socio-economic and cultural and language realities of One Health Systems in the Global South limiting appetite for use.

- **The process of developing AMR mitigation tools** does not always incorporate LMIC stakeholder engagement and co-creation, nor reflect local AMR knowledge systems nor a deep understanding of the diverse cultural and socio-economic realities of LMICs. Additionally, most KT tools are written by researchers and academics and the information may be inaccessible to end-users including policymakers.
- **The capacity for implementing existing AMR mitigation tools** in LMICs is limited by multi-layered challenges of financial resource constraints, inadequate access to these tools, the lack of contextualized guidelines on how to translate knowledge into policy and practice, inadequate expertise in KT and most importantly, the lack of resonance of with local LMIC languages and realities.

iv. **Within LMIC resource constrained environments,** domestic financial resources for translating existing AMR mitigation knowledge on a sustainable basis are limited.

v. **Donor funding for AMR mitigation[1].** *Most donor funding is restricted to the development of Knowledge Translation (KT) tools, their publication, and limited dissemination. However, this funding typically does not extend to supporting the integration and adoption of these tools into practice, policies, or actions. This restriction hinders the sustainable uptake of KT tools, as they are often utilized only in the short term and not fully adopted by end users.*

2. What needs to happen for KT tools and resources to be implemented in LMICS for moving AMR evidence into practice?

Section 2.1 Table 2 presents the co-developed themes with content outputs showing what needs to happen for LMICs to translate existing AMR mitigation knowledge into policy and practice. For a complete list of outputs addressing this question and a visual of the content cards, refer to Appendix 2. Section 2.2 provides a narrative synthesis of what needs to happen for LMICs to use existing KT tools to translate AMR mitigation knowledge and tools into policy and practice. **Asterisked items indicate that the content requires further unpacking to be integrated into the analysis.*

2.1 Co-developed themes and participant outputs

Table 2 What needs to happen for LMICs to use existing KT tools to translate AMR mitigation knowledge into policy and practice

Theme	Outputs
Cross-Cutting Enablers	• Make tools and resources accessible. • Increase visibility and awareness of tools.
Political Commitment	• Engagement with political stakeholders. • Political will and political buy-in. • Government support to enable AMR-related policies.
Comprehensive Engagement	• Stakeholder engagement throughout the process. • Better engagement of end-users and policy makers in LMICs.
Resource Mobilization	• Prioritization of resources and mobilizing for additional resources. • Allocate resources to facilitate KT. • Exit and handover strategy for funded projects. • Strategy for moving projects to the level of national programs (sustainability).
Implementation Strategies	• Interventions informed by needs analysis, bottom-up approach. • Establish KT hubs—regional and national. • Engage all stakeholders from community organizations, governments.
Education and Training	• Build capacity in KT methods. • Develop a curriculum for KT.

[1] This content in italics represents opinions on donor review funding provided during the participant review round.

	• Train KT trainers.
Tool Adaptation	• Simplify tools and incorporate feedback from end-users. • Adapt and translate tools to the local context and languages.
KT Networks	• Identify local KT experts and champions. • Engage social scientists for behaviour change expertise. • Peer-to-peer learning from experts. • Cross country sharing on what hasn't worked vs what has worked.
Paradigm Shift	• Elevate the importance and relevance of KT in the context of science. • Understand the value of KT.
Ownership	• Encourage community ownership of [AMR] solutions. • Local ownership.

2.2 Synthesis of explanations

This narrative synthesizes participants' insights on the key actions needed to implement KT tools and resources effectively to mitigate AMR in LMICs.

i. **Prioritising AMR as a national priority is key to effective mitigation**. This will require strong political support for existing AMR mitigation knowledge, tools and resources and ownership of the process and outcomes of translating this knowledge into actionable strategies, policies and practices.

Streamlining AMR mitigation priorities by engaging with policymakers, researchers and key stakeholders to identify and agree on a select few to "translate" into action maximising the use of resources and providing local evidence for integrating KT into national programs for long-term impact.

ii. **Strategically engaging stakeholders** - policymakers, researchers, and other end-users- throughout the KT process promotes collaboration, trust and ownership of KT processes and maximizes the probability that AMR knowledge, tools and resources will translate into relevant actionable strategies, policies and practices.

- **Using a co-creation process, a bottom-up approach and local expertise to test/adapt** /develop KT tools for translating AMT evidence into local contexts Local KT experts and local social scientists should be involved to better understand social power dynamics and behaviour change in the specific setting and maximize the tools' uptake and relevance.
- **Increasing the visibility and accessibility of adapted tools** by translating tools into relevant languages, incorporating user feedback, and developing context-specific communication strategies. This would also include leveraging context-specific tools that have been adopted to address other health challenges to mitigate AMR.

iii. **Increasing awareness of the value of KT for AMR mitigation among all stakeholders.** This could include elevating how KT is perceived and valued in mitigating AMR especially in local conditions and realities.

iv. **Mobilising increased investments for KT for mitigating AMR** in and by LMICs and sustainable financing, along with targeted funding for selected KT tasks, integrating externally funded projects into national programs and planning exit strategies for externally-funded projects to support long-term sustainability.

v. **Building capacity for knowledge translation** for AMR mitigation among stakeholders is essential for strengthening the expertise needed to effectively use and disseminate KT tools. This could include training in KT for AMR mitigation, guidelines for easily adapting existing knowledge and tools to local contexts, building interdisciplinary One Health KT networks for knowledge-sharing and identifying KT champions to drive the process.

3. Takeaway messages

i.	Prioritise the realities of local contexts by valuing diverse knowledge systems, involving local stakeholders, and addressing social, cultural and economic realities to make KT tools relevant and impactful.
ii.	Foster political will and alignment by engaging policymakers and stakeholders from health, agricultural and environmental management systems, prioritizing AMR in national strategies, and highlighting the value proposition of KT to mitigate AMR nationally.
iii.	Focus on a few clearly defined AMR priorities to enable more targeted and impactful knowledge translation efforts aligned with country-specific needs.
iv.	Inclusive engagement of all stakeholders—policymakers, end-users, and communities—is critical to building awareness, capacity, and trust in AMR mitigation efforts using effective KT tools.
v.	Secure adequate and sustainable financial investments and mobilize domestic and international funding to support KT for the sustainable implementation of AMR mitigation strategies, interventions and solutions.
vi.	Raise awareness of the value of KT tools to implement sustainable strategies, interventions and solutions to mitigate AMR among stakeholders, ensure better dissemination, and simplify access to KT tools and resources to help stakeholders understand their importance and utility.
vii.	Build capacity through education, training programs, and guidelines to equip stakeholders with the skills to use and disseminate KT tools effectively to mitigate AMR.

viii.	Adapt KT tools for AMR mitigation to local contexts, using relevant languages and incorporating user feedback to ensure accessibility and practicality.
ix.	Establish One Health multidisciplinary KT networks promote collaboration, peer learning, and cross-country knowledge sharing, driving innovative AMR solutions.
x.	Recognize KT as a core element of scientific research and elevates its importance to ensure effective integration into AMR policies and strategies.

4. Conclusion

The ICID Congress in Cape Town, South Africa, provided ICARS and Science for Africa with an invaluable opportunity to collaborate with experts from diverse disciplines and backgrounds to address critical challenges in implementing knowledge translation (KT) tools and resources to mitigate AMR in LMICs. Through the innovative and participatory RTW process, participants highlighted a range of barriers, including political, financial, and systemic challenges, as well as the disconnect between existing KT tools, evidence-based AMR strategies, interventions and solutions developed in country contexts, and the unique cultural, social, and economic contexts of LMICs. These discussions underscored the importance of fostering political commitment, ensuring the translation of evidence from local research (internationally or domestically funded) into actionable policies and practices, and adopting inclusive, context-sensitive approaches to developing and disseminating KT tools.

Addressing these multi-faceted realities requires targeted strategies, such as building capacity through education and training, strengthening multi-disciplinary networks, and promoting community ownership of AMR solutions. By integrating local voices, adapting AMR strategies, interventions and solutions and KT tools to specific contexts, and ensuring sustainable funding, stakeholders can enhance the value proposition, relevance and impact of KT in AMR mitigation efforts.

This workshop's insights and draft takeaway messages provide a foundation for advancing KT efforts to mitigate AMR with LMICs playing a visible role in driving equitable and sustainable solutions[2].

[2] Appendix provides a list of KT resources and tools that help operationalise these take away messages in systematically and sustainably integrating AMR One Health evidence and solutions into practice and policy.

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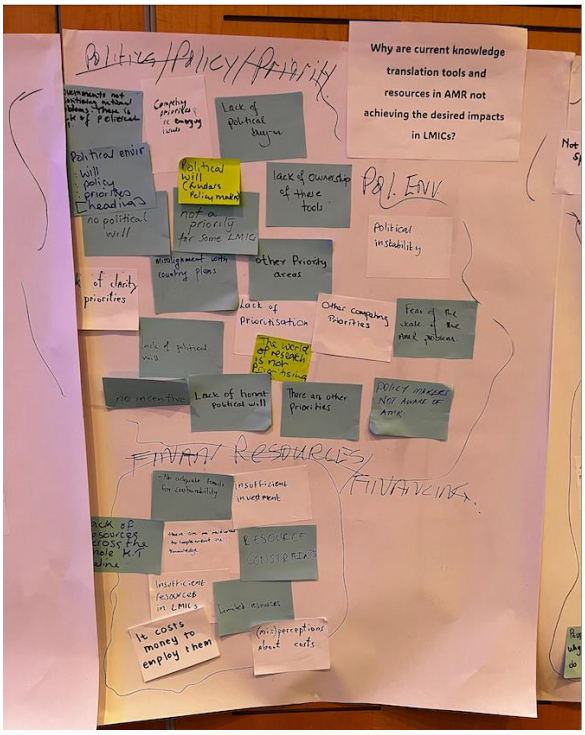
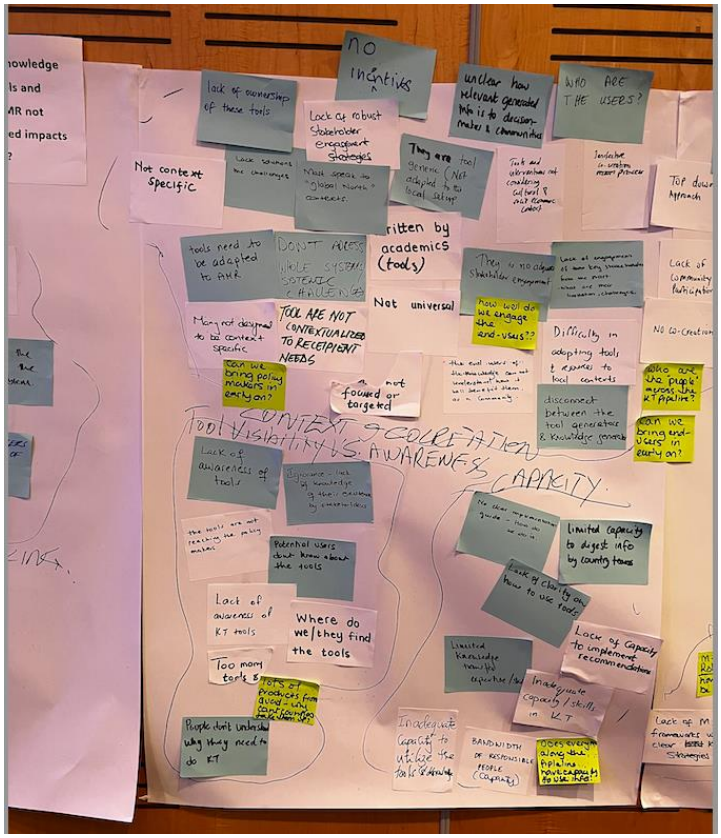
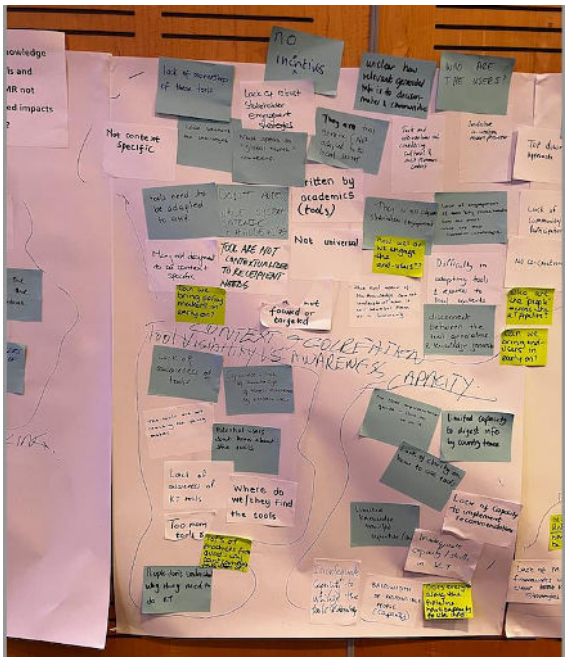
Appendix 1 Outputs for question 1: Visual boards and comprehensive list







Why are current knowledge translation (KT) tools and resources in AMR not achieving the desired impacts in LMICs?

Overarching theme Whose knowledge?

- Intellectual bias about the value of different forms of knowledge
- Too traditional in approach to knowledge generation
- For whom is knowledge being developed and translated?
- With whom is knowledge being developed and translated?
- Are we asking the right questions?
- Are we asking the right people?
- Does knowledge generation and translation take social and cultural realities into account?
- KT is not a business as usual practice [it can be transformative]

Theme 1 Political Environment: Will, Priorities and Policies

- There is a lack of political will; Lack of political will; No political will; Lack of honest political will
- Lack of political buy-in; Political instability
- Fear of the scale of the AMR problem
- Policy makers are not aware of AMR
- Governments not prioritising national problems
- Misalignment with country plans
- Competing priorities for example, remerging issues
- Not a priority for some LMIC
- There are other priorities; Other competing priorities
- Lack of clarity in priorities
- Lack of prioritisation
- Lack of ownership of these tools
- The world of research is not prioritising KT
- No incentive*

Theme 2 Finance Resources/Financing

- Insufficient investment
- There are no adequate funds for sustainability
- There are no resources to implement the knowledge
- Resource constraints; Limited resources
- Insufficient resources in LMICs
- It costs money to employ them
- (Mis)perceptions about costs*

Theme 3 Context, Co-creation and Communication

- Lack of ownership of these tools
- Lack of robust stakeholder engagement strategies; Lack of engagement of key stakeholders from the start
- Limited understanding of stakeholders limitations and challenges
- Top-down approach [to tool development]
- Ineffective co-creation process; No co-creation
- Lack of community participation
- The end users of the knowledge cannot understand how it will benefit them as a community
- End users and policy makers not brought on early enough in the process
- Tools written by academics
- Disconnect between the tool generators and knowledge generators
- Unclear how relevant generated information is to decision makers and communities
- Tools may not be designed to be context-specific; Tools are not context-specific

- Tools are not contextualised to recipients needs
- Tools are not focused or targeted
- Tools don't address whole systems/systemic challenges
- Lack of solutions to the challenges
- Most tools speak to "global north" contexts
- Tools need to be adapted to AMR
- Tools are not universal
- Tools are too generic (not adapted to the local setup)
- Difficulty in adapting tools and resources to local contexts
- Tools and interventions do not consider cultural and socio-economic contexts
- Tools not available in local languages
- Difficulty in interpreting AMR terminologies into local languages
- Tools not broadly disseminated to grassroots levels
- Gaps in communicating researcher results to policymakers in easier terms
- Unable to communicate messages in easy terms to the public/community
- Policymakers not aware of AMR
- Poor dissemination
- AMR not "LOUD" enough as a threat compared with other infectious diseases.

Theme 4 Visibility and Awareness

- Lack of awareness of tools
- Ignorance - lack of knowledge of their existence by stakeholders
- The tools are not reaching the policymakers
- Potential users don't know about the tools
- Lack of awareness of KT tools
- Where do we/they find the tools
- Too many tools
- People don't understand why they need to do KT

Theme 5 Capacity for implementation

- No clear implementation guide - how do we do it?
- Limited capacity to digest info by country teams
- Lack of clarity on how to use tools
- Limited knowledge transfer expertise/skills
- Lack of capacity to implement recommendations
- Inadequate capacity/skills in KT
- Inadequate capability to utilise the tools and knowledge
- Bandwidth of responsible people (capacity)
- Does everyone along the pipeline have capacity to use information

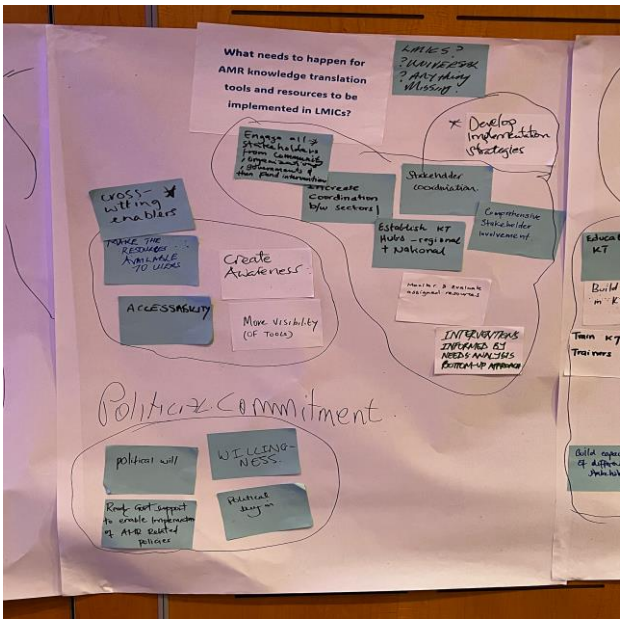
Theme 6 Funder Alignment

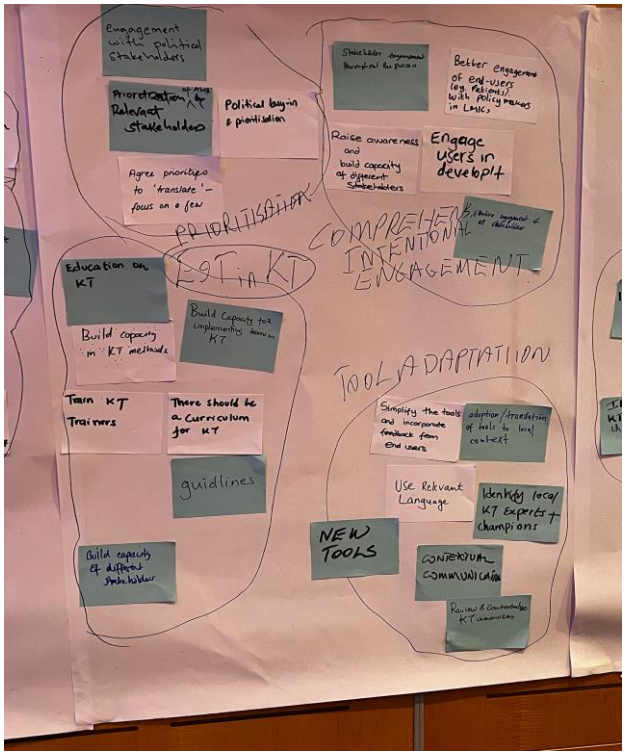
- Donor objectives tend to be predefined and rigid and not easily influenced
- Funders not working together
- Difficult to build in sustainability
- Funders can be clearer on guidelines

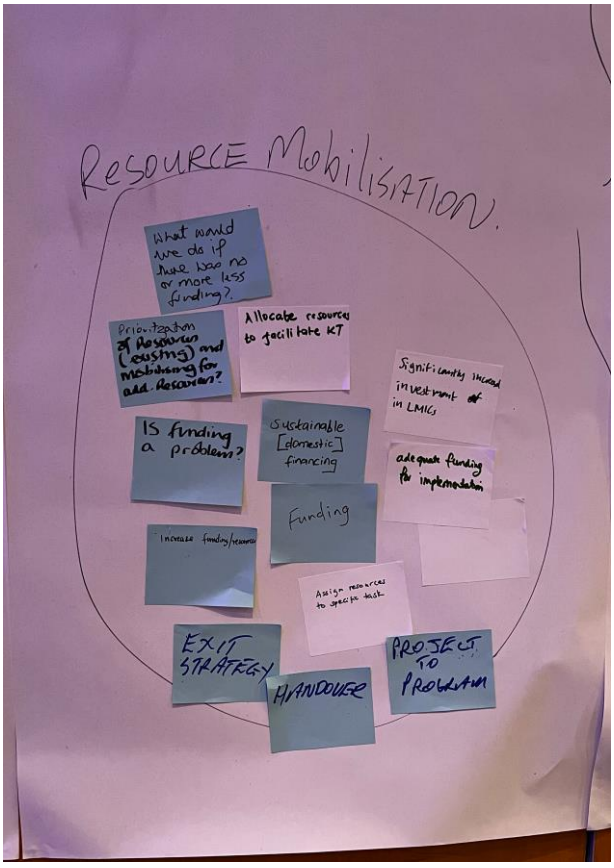
Theme 7 Monitoring and evaluation

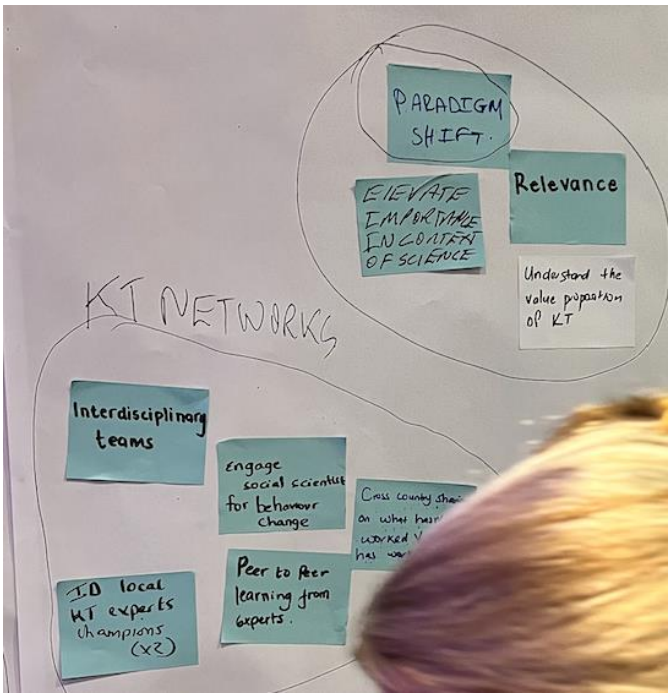
- Lack of M&E frameworks with clear KT strategies
- No accountability for implementers

Appendix 2 Outputs for question 2: Visual boards and comprehensive list









What needs to happen for knowledge translation tools and resources to be implemented in LMICs for AMR mitigation?

Cross-cutting enablers

- Make the resources available to users
- Create awareness of the tools and resources
- Make tools and resources accessible
- Increase visibility (of tools)

Theme 1 Political Commitment

- Political will and political buy-in
- Political buy-in and prioritisation
- Agree priorities to 'translate' — focus on a few
- Ready government support to enable implementation of AMR related policies

Theme 2 Prioritisation

- Engagement with political stakeholders
- Prioritisation of AMR by relevant stakeholders
- Political buy-in and prioritisation
- Agree priorities to 'translate' — focus on a few

Theme 3 Comprehensive Intentional Engagement

- Stakeholder engagement throughout the process
- Better engagement of end-users (e.g. patients) with policymakers in LMICs
- Raise awareness and build capacity of different stakeholders
- Engage users in development of KT tools and resources
- Effective management of all stakeholders

Theme 4 Resource Mobilisation

- Prioritisation of resources (existing) and mobilising for additional resources
- Allocate resources to facilitate KT
- Significantly increased investment in LMICs
- Sustainable (domestic) financing
- Adequate funding for implementation
- Increase funding/resources
- Assign resources to specific tasks
- Exit and handover strategy for funded projects
- Strategy for moving projects to the level of national programs (sustainability)

Theme 5 Implementation Strategies

- Interventions informed by needs analysis bottom-up approach
- Engage all stakeholders from community/organisations/governments
- Increase coordination between sectors
- Comprehensive stakeholder involvement
- Stakeholder coordination
- Establish KT hubs - regional and national

- Monitor and evaluate assigned resources
- Fund the interventions

Theme 6 Education and training

- Education on knowledge translation
- Build capacity in KT methods
- Build capacity of implementing teams on KT
- Train KT trainers
- There should be a curriculum for KT
- Guidelines
- Build capacity of different stakeholders

Theme 7 Tool adaptation

- Simplify the tools and incorporate feedback from end users
- Adoption/translation of tools to local context
- Use relevant language
- New tools
- Identify local KT experts and champions
- Contextual communication
- Review and contextualise KT resources

Theme 8 KT Networks

- Inter-disciplinary teams
- Engage social scientists for the meaning of behaviour change in local realities
- ID local KT experts and champions
- Peer to peer learning from experts
- Cross country sharing on what hasn’t worked vs what has worked

Theme 9 Paradigm Shift

- Elevate importance and relevance of KT in the context of Science
- Understand the value proportion of KT

Theme 10 Ownership

- Encouraging community ownership of solutions
- Local ownership

Appendix 3 Selected Online Knowledge Translations Resources and Tools

These tools and resources provide guidance on the "how to" of moving evidence into action; they are not specific to any evidence base or policy context although public health is a common thread.

1. Knowledge Translation Program (KTP) (2024, Unity Health Toronto, Canada)

This site is a comprehensive, searchable online collection of evidence-informed methods and tools to support evidence in policy. The authors designed many tools in partnership with low-middle-income countries for implementation in those settings. Tools include barriers and facilitators assessment toolkit, an end-of-grant KT plan, the Knowledge to Action Model, which guides users through implementing evidence into practice, Ready Set Go, an online organization readiness assessment for KT, and the Evidence-Based Medicine Toolbox.

The authors also report on the feasibility testing of their Knowledge to Action workbook in this open access per-reviewed publication:

Fahim, C., Courvoisier, M., Somani, N. *et al.* Creation of a theoretically rooted workbook to support implementers in the practice of knowledge translation. *Implement Sci Commun* **4**, 99 (2023). https://doi.org/10.1186/s43058-023-00480-w

Link: https://knowledgetranslation.net/tools/

2. Evidence-informed Policy Network (World Health Organisation, 2025)

A WHO-supported network that cultivates collaborations and encourages the structured application of research evidence in health policymaking. It provides resources and frameworks to facilitate evidence-informed decision-making, including guides for qualitative evidence synthesis, developing evidence briefs, conducting policy dialogues and citizen engagement, and checklists for integrating evidence into policymaking and enhancing communication and advocacy efforts.

Link: https://www.who.int/initiatives/evidence-informed-policy-network

3. Knowledge Translation (Canadian Institutes of Health Research, modified 2024)

Falling under the Knowledge Mobilisation section, this site is a rich resource for information and tools related to planning integrated KT and end-of-grant approaches. The learning portal lists KT primers (but not all primers are open access), tools and resources for knowledge-to-action, including LMICS (all open access), and tools for researcher and knowledge user engagement. The Knowledge Translation in Low & Middle-Income Countries: A Learning Module (2010) is practical and open access.

Links: https://cihr-irsc.gc.ca/e/29529.html; https://cihr-irsc.gc.ca/e/documents/lm_kt_lmic-en.pdf (KT Learning Module)

4. The Knowledge Translation Toolkit: Bridging the Know–Do Gap: A Resource for Researchers (IDRC, 2011)

This open-access downloadable book offers a comprehensive guide to understanding and applying knowledge translation (KT) to bridge the gap between research, policy, practice, and people. This toolkit covers essential KT enablers—such as context mapping and evaluative thinking—supported

by practical examples, step-by-step implementation guides, and useful references. Drawing on the expertise of specialists from various disciplines worldwide, it aims to equip researchers with the skills and motivation to apply KT effectively and maximize its impact.

Link: https://idrc-crdi.ca/en/book/knowledge-translation-toolkit-bridging-know-do-gap-resource-researchers#:~:text=What%20we%20do-,The%20Knowledge%20Translation%20Toolkit:%20Bridging%20the%20Know%E2%80%93Do,Gap:%20A%20Resource%20for%20Researchers&text=The%20Knowledge%20Translation%20Toolkit%20provides,and%20to%20use%20it%20well.

5. Knowledge Translation (KT) Planning Primer (Public Health Agency of Canada, 2012)

This Knowledge Translation (KT) tool supports active forms of knowledge sharing. It provides an overview of the steps of KT (stakeholder analysis, KT objectives, messages, methods of KT, and impact evaluation measures) with worksheets for each step and a user guide to assist teams in completing the worksheets and developing a practical KT plan.

Link:
https://publications.gc.ca/site/eng/434858/publication.html
This link takes you to the Government of Canada's permanent catalog record of this publication.

https://publications.gc.ca/collections/collection_2013/aspc-phac/HP35-37-2012-eng.pdf
Click this link, then click Continue to publication. No other actions are required.

6. Responsive Dialogues: Enabling public-driven policies and action on Antimicrobial Resistance (Wellcome, 2021)

Community and stakeholder engagement and co-creating policy solutions are key elements of contextually relevant KT, increasing the likelihood of sustainability. The Wellcome brief summarizes the key principles of responsive dialogue and the groundwork needed to prepare for community conversations to reciprocally inform evidence for policy and decision-making about contextually relevant AMR solutions.

Link: https://cms.wellcome.org/sites/default/files/2021-02/responsive-dialogues-antimicrobial-resistance.pdf

7. Responsive Dialogues: Guidelines (ICARS, 2024)

This tool builds upon the Wellcome brief and provides an in-depth guide for engaging stakeholders in learning about AMR and co-creating AMR solutions and policy recommendations grounded in evidence and local realities. Community engagement across the research and innovation development cycle increases AMR solutions' relevance, uptake, and impact.

Link: https://icars-global.org/knowledge/responsive-dialogue-guidelines/

8. Resources and tools for addressing the link between research and policy and maximizing research uptake (GDNet and CIPPEC, 2012 & 2013)

Under the 'Spaces for Engagement: Using Knowledge to Improve Public Decisions' program, (Gov.UK) GDNet and Center for the Implementation of Public Policies for Equity and Growth (CIPPEC) have produced different types of resources addressing the link between research and policy and aiming at building southern researchers' capacity to maximize their research uptake.

These toolkits listed in 8.1 and 8.2 below are available in English and Spanish.

Link: https://www.gov.uk/research-for-development-outputs?keywords=knowledge+translation+toolkit

8.1 How to design a policy influence plan

This topic offers 10 toolkits (excluding Toolkits No. 2 and 7, which are not available) that address various components of developing a public policy influence plan. Weyrauch, V. developed all the toolkits in this section: Echt, L. CIPPEC, Buenos Aires, Argentina.

Toolkits: How to design a policy influence plan	**Links (English and Spanish)**
Toolkit No.1: What is an influence plan? Why should we plan? (2012) 5 pp.	guia01_cippec_planificaciondelaincidencia.pdf; guia01_ingles_cippec_planificaciondelaincidencia.pdf
Toolkit No. 2 is not available.	
Toolkit No.3: Where are we, and how far can we go? Identify strengths, weaknesses, opportunities, and challenges. (2012) 5 pp.	guia03_cippec_planificaciondelaincidencia.pdf; guia03_ingles_cippec_planificaciondelaincidencia.pdf
Toolkit No.4: What we desire. Define influence objectives. (2012) 7 pp.	guia04_cippec_planificaciondelaincidencia.pdf; guia04_ingles_cippec_planificaciondelaincidencia.pdf
Toolkit No.5: Who should we work with? Define actors and alliances. (2012) 6 pp.	guia05_cippec_planificaciondelaincidencia.pdf; guia05_ingles_cippec_planificaciondelaincidencia.pdf
Toolkit No.6: How to generate the desired impact. Define the proposal. (2012) 6p.	guia06_cippec_planificaciondelaincidencia.pdf; guia06_ingles_cippec_planificaciondelaincidencia.pdf
Toolkit No. 7 is not available.	
Toolkit No.8: How to communicate. Define the strategy and key messages. (2012) 7 pp.	guia08_cippec_planificaciondelaincidencia.pdf; guia08_ingles_cippec_planificaciondelaincidencia.pdf

Toolkits: How to design a policy influence plan	Links (English and Spanish)
Toolkit No.9: Who, how much, and when. Define resources and timeline. (2012) 8 pp.	guia09_cippec_planificaciondelaincidencia.pdf; guia09_ingles_cippec_planificaciondelaincidencia.pdf
Toolkit No.10: What have we learned? An approximation to monitoring and evaluation of policy influence. (2012) 6 pp.	guia10_cippec_planificaciondelaincidencia.pdf; guia10_ingles_cippec_planificaciondelaincidencia.pdf

8.2 How to communicate research for policy influence

This topic includes five toolkits that address different aspects and tools on research communication for policy influence, including policy briefs.

Toolkits: How to communicate research for policy influence	Link
Toolkit No.1: First approach to research communication. Weyrauch, V.; Echt, L.; Arrieta, D. CIPPEC, Buenos Aires, Argentina (2013) 5 pp.	Guia-01-serie-3-espanol.pdf Guia-01-serie-3-ingles.pdf
Toolkit No.2: Policy briefs. Weyrauch, V.; D'Agostino, J. CIPPEC, Buenos Aires, Argentina (2013) 8 pp.	Guia-02-serie-3-espanol.pdf Guia-02-serie-3-ingles.pdf
Toolkit No.3: Engage with media. Weyrauch, V.; Echt, L.; Arrieta, D. CIPPEC, Buenos Aires, Argentina (2013) 8 pp.	Guia-03-serie-3-espanol.pdf Guia-03-serie-3-ingles.pdf
Toolkit No.4: Online tools. Weyrauch, V.; Echt, L.; Arrieta, D. CIPPEC, Buenos Aires, Argentina (2013) 11 pp.	Guia-04-serie-3-espanol.pdf Guia-04-serie-3-ingles1.pdf
Toolkit No. 5: Dynamic formats for research communication. Weyrauch, V.; Echt, L.; Arrieta, D.; Jalfin, S. CIPPEC, Buenos Aires, Argentina (2013) 9 pp.	Guia-05-serie-3-espanol.pdf Guia-05-serie-3-ingles.pdf

9. Program Sustainability Assessment Tool (PSAT) (Washington University in St. Louis, 2025)

Sustainability is an essential pillar of KT. This online tool is a self-assessment used by program staff and partners to evaluate the sustainability capacity of a program. The tool is available in English online and for download in Spanish.

Links: https://sustaintool.org/psat/; https://www.sustaintool.org/wp-content/uploads/2024/06/Sustainability-ToolV3_w-scoring_2023.pdf