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Surveillance of antimicrobial use and resistance: How can evaluation information help decision-making?

Joining forces to evaluate surveillance of antimicrobial use and resistance

Following the calls of the World Health Organisation (WHO), the World Organisation for Animal Health (OIE) and the UN Food and Agricultural Organisation (FAO), many countries are in the process of establishing or improving surveillance systems to measure antimicrobial usage and resistance in both human and livestock populations.

Because there is a range of options when selecting design and methods for these systems, the type and quality of the resulting surveillance information will vary.

In a first phase, the CoEvalAMR consortium collected, applied and assessed methods and tools that are currently available for the evaluation of the surveillance of antimicrobial use (AMU) and antimicrobial resistance (AMR) to provide guidance to anyone with an interest and/or duty in this field.

The results of this project provide:

- an overview of evaluation frameworks and tools available
- understanding of what each of these frameworks and tools has to offer
- recognition of the strengths, weaknesses and requirements of each framework and tool
- support in identifying tools that are most suitable for specific evaluation goals
- guidance for planning cross-sectoral evaluations

Full information available

To access the results of the CoEvalAMR project, visit our [online guidance](#) & [website](#)



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Surveillance evaluation: Why and how?

You may need to evaluate a surveillance system in response to the request of an external customer. Alternatively, it might fulfil an agency or industry need for information to improve the system. Your evaluation methods will depend on the goal of the evaluation itself.

The customer who commissions the evaluation will determine its scope and expectations, and most probably the timeline and budget available.

These aspects will shape the evaluation's goals and will determine surveillance system attributes that are of most interest. Surveillance evaluation goals can include one or more of the following:

- identifying strengths and weaknesses, challenges and opportunities within a surveillance system
- making recommendations to improve surveillance
- providing independent feedback on a surveillance programme
- monitoring any evolving requirements of surveillance to maintain the system's relevance
- certifying that surveillance is working, in order to gain trust from citizens and partners
- assessing the economic efficiency of the surveillance system

Evaluation of One Health surveillance

One Health surveillance of AMU and AMR protects health in humans, animals and ecosystems using a systems approach to guide decisions and optimise the use of resources. This necessitates a collaborative, multi-stakeholder approach that is not present in conventional domain-specific surveillance systems.

Evaluations of One Health surveillance systems for AMU and AMR require a broad conceptualisation to include the systemic nature of this problem; as well as a focus on collaborative structures.

One Health surveillance

- One Health surveillance refers to using a systemic, cross-sectoral, multi-stakeholder perspective to improve surveillance.
- The implementation of One Health surveillance for AMU and AMR is a central recommendation of the WHO [global action plan](#) on antimicrobial resistance.

Which tools to use for what?

Several tools are already available to guide and support AMU and AMR surveillance evaluation. Twelve of these were assessed and compared within the CoEvalAMR project, with emphasis on their applicability for AMU and AMR, the evaluation themes covered, and their focus on One Health aspects. Additionally, their user friendliness and appearance were considered.

Building on this assessment, we developed an [online selection tool](#) to facilitate the choice of evaluation tools, allowing prioritisation based on an evaluation's goal. Users will rank the importance of seven themes that they would like to consider in their evaluation, covering technical, resource, integrative and collaborative aspects as well as impact, adaptivity and surveillance items. Based on these rankings, the selection tool suggests which evaluation tool(s) would fit best.

We have also included a range of practical case studies, which alongside additional information about evaluation are available in our [guidance](#).

Future users are invited to share their experience on the evaluation tools and to add their feedback reports to the website.

Contact us

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