POLICY BRIEF

UNDERSTANDING THE USE OF EVIDENCE IN HEALTH POLICYMAKING

CASE STUDY: ANTIBIOTIC PRESCRIBING GUIDELINES

EU-JAMRAI
Joint Action on Antimicrobial Resistance and Healthcare-Associated Infections

Co-funded by
the Health Programme
of the European Union

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Every year, more than €1 billion is invested worldwide in research related to antimicrobial resistance (AMR), including research for new technologies, improved stewardship and surveillance, and better understanding of microbes and their transmission.[1] These investments are made not only in the pursuit of discovery and scientific knowledge but also to inform decision-making for the benefit of patients, animals and the environment. Coupled with efforts to monitor highly resistant pathogens, this creates a dynamic pool of evidence to draw upon to inform policies and practices.

As a part of the EU Joint Action on AMR and Healthcare-Associated Infections (EU-JAMRAI), we wanted to understand how countries use evidence to inform their policies and practices. We chose the concrete case of antibiotic prescribing guidelines, both for human and veterinary health. We performed in-depth interviews with human health policymakers in ten countries: Belgium, Denmark, France, Germany, Luxembourg, the Netherlands, Norway, Romania, Spain, and Sweden. We interviewed policymakers from Ministries of Agriculture in all countries except Romania. This qualitative data gives insights into how countries are using evidence to inform antibiotic prescribing practices.

IN GENERAL, EXPERT OPINION IS THE BASIS FOR ANTIBIOTIC PRESCRIBING GUIDELINES

Nine of 10 European countries have antibiotic prescribing guidelines for human health. Five of them have separate prescribing guidelines, one for community health and one for hospital care. All nine countries use experts to produce and update the guidelines. This may be through infectious disease societies, academic institutions, national agencies, or dedicated foundations. Several interviewees were uncertain about how the experts used research evidence to update the guidelines. Only three countries specifically mentioned that systematic reviews of evidence formed the basis for guideline updates. Interviewees mentioned that antibiotic guidelines often include only antibiotics available in the country. However, one country has rejected this approach. Instead, it has included the most scientifically, clinically appropriate antibiotic, regardless of its

national availability. Alternative treatment options are always included in the guidelines when the recommended antibiotic is not available on a long-term basis.

Nine of 10 countries also have antibiotic prescribing guidelines for veterinary health, established and updated through expert opinion. Experts may include veterinarians, farmers, academics, feed industry, and pharmaceutical industry. The guidelines are generally based upon the guidance from the European Medicines Agency as well as national resistance patterns. Several interviewees pointed out that there is limited relevant research available, necessitating a focus on local experiences rather than evidence.

Generally, human and veterinary prescribing guidelines are infrequently updated, perhaps every five years. For human guidelines, this may make it difficult to include new antibiotics.

THERE ARE CHALLENGES WITH RELYING SOLELY ON EXPERT OPINION

Research has revealed limitations with processes that rely solely on expert opinion.[2] Experts may use non-systematic methods when reviewing research, potentially biased towards certain academic fields, journals, or research designs. Conducting a systematic review has several advantages over other methods of evidence collection, including reducing the risk of bias, ensuring a comprehensive research strategy, and ensuring transparent processes for critical appraisal[2].

Of course, the quality of a systematic review greatly depends on the quality of available evidence. In areas with little research available, like for veterinary antibiotic prescribing guidelines, a systematic review may not help to inform policymaking. On the contrary, in situations like creating antibiotic prescribing guidelines for human health, the amount of literature available may be overwhelming and hinder the process of evidence collection. Therefore, how evidence is used should be carefully weighed in order to provide the greatest impact with the resources available.

OPPORTUNITIES TO IMPROVE THE USE OF EVIDENCE IN POLICYMAKING

There are many resources available to assist in evidence-informed policymaking and practices. Based upon existing tools and learnings from interviews, the EU-JAMRAI summarizes standard processes to facilitate the translation of evidence into health policies.

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1. IDENTIFY THE PROBLEM

- **Self assessment tools** can be useful to identify opportunities for policy improvement.
- **Country-to-country visits** have been shown to be effective tools to learn from others and identify opportunities for policy improvement.
- When looking at monitoring data, **benchmarking** (national + international data) may allow to identify opportunities for policy improvement.
- **Stakeholders** may be a useful source of information for policy improvement.
- In case of a health crisis (outbreak, shortages,...), **problems may appear as self evident.**

2. ASSESS EVIDENCE TO CLARIFY THE PROBLEM

- The use of a **scientific expert group or national agencies' expertise** may be appropriate to gather evidence.
- **Systematic literature reviews** should always prevail over expert opinions as source of evidence.[2]
- Several tools help to find systematic reviews:
  - The **Cochrane Library** provides a wide range of health-related systematic reviews.[3]
  - The **PDQ-evidence database** provides access to systematic reviews for health policies.[4]
  - **SUPPORT Summaries** provide summaries of systematic reviews on health system interventions. Mostly designed for low and middle income countries.[5]
- The **GRADE handbook** should be use to evaluate the quality and strength of evidence.[6]
- Don't start from scratch: **rely on other countries'** expertise, best practices and experience.

3. DESIGN AND IMPLEMENT POLICY OPTIONS

- The **Evidence-Informed Policy Network (EVIPNet),** established by the World Health Organization, assists countries in the development of evidence-informed policies.[7]
- National/European **platforms to share best-practice evidence-based experiences** may assist countries in the design of policy options.[8]
- The European **Structural Reform Support Service (SSRS)** can assist countries in the implementation of technical and structural reforms.[9]

4. MONITOR AND EVALUATE

- **Monitoring and evaluation is crucial** to assess the impact of an intervention.10
- **Indicators and targets** need to be defined beforehand to evaluate the success of an intervention.
- **Regular audits** must be conducted to collect and report performance data.10

5. RECALIBRATE

If necessary

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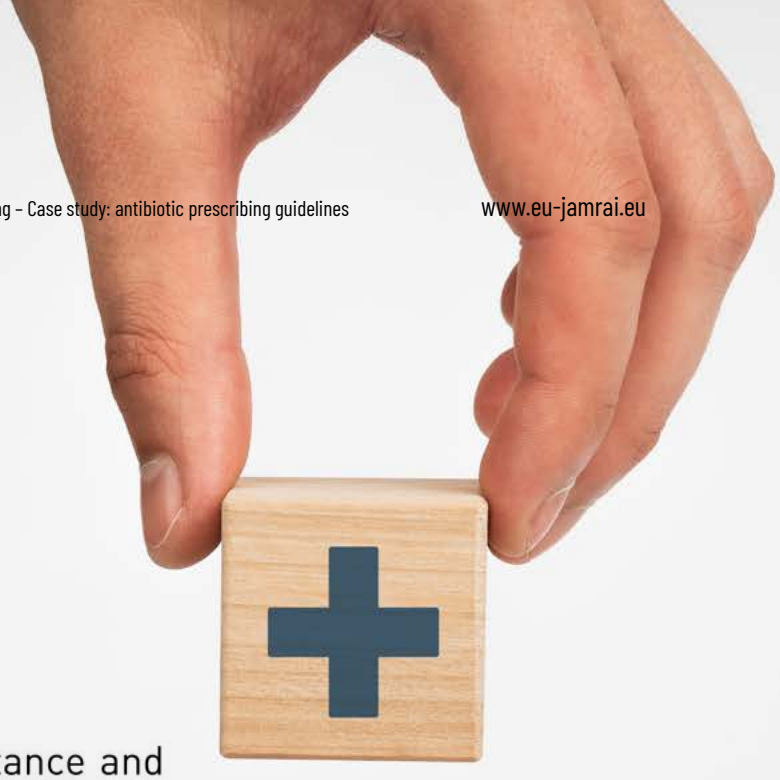

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This document arises from the Joint Action on Antimicrobial Resistance and Healthcare-Associated Infections (EU-JAMRAI), which has received funding from the European Union, in the framework of the Health Program (2014-2020) under the Grant Agreement Nº761296. Sole responsibility lies with the author and the Consumers, Health, Agriculture and Food Executive Agency is not responsible for any use that may be made of the information contained herein