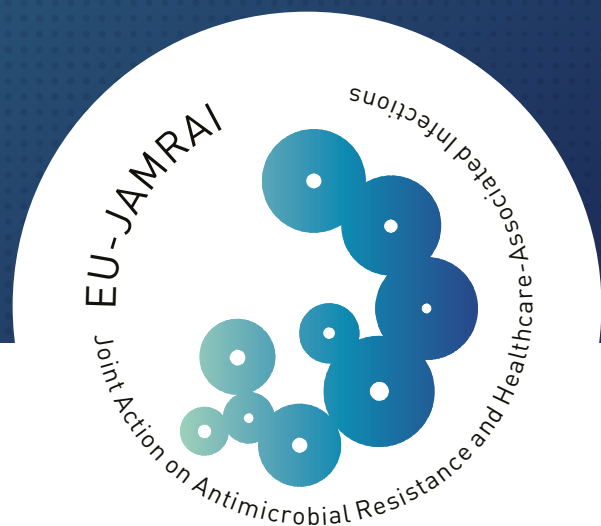




# EU-JAMRAI LAYMAN REPORT



Co-funded by  
the Health Programme  
of the European Union

EU-JAMRAI | Layman report

[www.eu-jamrai.eu](http://www.eu-jamrai.eu)



# ABOUT EU-JAMRAI



Joint Action  
Antimicrobial Resistance and  
Healthcare-Associated Infections

## THE CHALLENGE

Life-saving antibiotics revolutionized our society and economy. Previously deadly diseases became routine illnesses, requiring little more than a brief treatment. These achievements are now at risk mainly because of the excessive or inappropriate use of antimicrobials.

Antibiotic resistance imperils global health, with multi-drug resistant bacterial infections accounting for over 33,000 deaths in Europe alone in 2015. The number of annual global deaths is unknown but predicted to be large.

The multiplication of national, European and international initiatives against antimicrobial resistance (AMR) over the last decade reflect a shared commitment to actively tackle this global health threat. However, bridging the gap between declarations and concrete actions is the underpinning challenge that policy-makers have to address.

## EU-JAMRAI MISSION

Funded by the participating partners and the Health Programme of the European Union with a total budget of 6.963.604€ (4.178.162€ from the European Commission), the European Joint Action on Antimicrobial Resistance and Healthcare-Associated Infections (EU-JAMRAI) has been a unique place gathering all key actors in the fight against AMR.

***AMR is an explicit priority within the Health Programme of the European Commission. We need to all work together. Because solving this problem in one place does not solve it in another place". Charles Price, DG SANTE***

EU-JAMRAI brought together 44 partners from 26 Member States, organisations such as ECDC, EFSA, OECD and WHO, and 45 stakeholders in-

involved in the field. Among them representatives of the civil society, health professionals, patient associations, actors from the animal and environmental sectors and companies.

***The joint forces of policymakers, international organizations and stakeholders is paramount for success in the global battle against AMR".***

***Marie-Cécile Ploy, EU-JAMRAI coordinator***

Its mission has been to foster synergies among EU Member States and propose concrete steps to strengthen the implementation of efficient and evidence-based One Health policies to tackle AMR and reduce Healthcare-Associated Infections.



## ABOUT EU-JAMRAI

### THE ONE HEALTH APPROACH BEHIND EU-JAMRAI WORK

The One Health approach recognises that human health, animal health and environment are interconnected. Efforts by just one sector are not enough to tackle antimicrobial resistance.

Policies, programmes and research should be designed and implemented with multiple sectors working together.

### CONCRETE RESULTS

For 3 and a half years (September 2017 – February 2021), EU-JAMRAI partners have contributed to bridge the gap between declarations and ac-

tions presenting concrete and operational actions with demonstrated potential to tackle AMR and reduce Healthcare-Associated Infections.

**Project name:** EU-JAMRAI – European Joint Action on Antimicrobial Resistance and Healthcare-Associated Infections

**Project life:** 1 September 2017 - 28 February 2021

**Funding:** Funded by the participating partners and the Health Programme of the European Union

**Total budget:** 6.963.604€ (4.178.162€ from the European Commission)

**Grant Agreement:** N°761296

**Complete list of beneficiaries:** download at [EU-JAMRAI website](https://www.eu-jamrai.eu) 

**WP leaders:**

- ▶ Institut National de la santé et la recherche médicale (INSERM), France
- ▶ French Ministry of Solidarity and Health (MoH-FR), France
- ▶ Spanish Agency of Medicines and Medical Devices (AEMPS), Spain
- ▶ Istituto Superiore di Sanità (ISS), Italy
- ▶ Dutch Ministry of Health, Welfare and Sport (VWS), Netherlands
- ▶ National Public Health Organization (NPHO), Greece
- ▶ Folkhälsomyndigheten - Public Health Agency of Sweden (FOHM), Sweden
- ▶ Norwegian Institute of Public Health (FHI), Norway



## EU-JAMRAI RESULTS

### Strengthening networks and sharing best practices between Member States

Coordinated by EU-JAMRAI, 14 participating countries completed several activities aiming at strengthening national response against AMR. The process included the following steps:

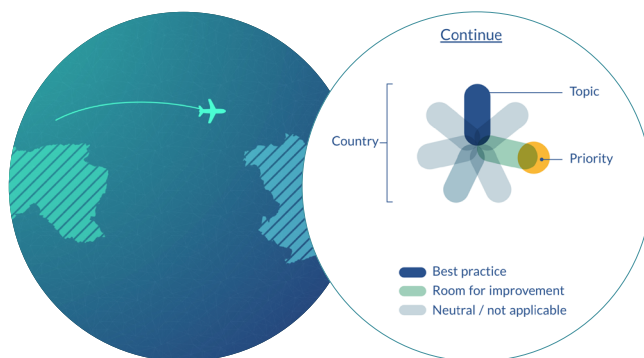
**1. Self-assessments:** Member States self-assessed their One Health national strategies and the implementation of their National Action

Plans to identify gaps and reflect internally on how to improve them.

**2. External voluntary evaluation / Country-to-country visits:** expert teams of thirteen EU Member States visited their peers in other EU countries to evaluate their strategies.

## ONE HEALTH COUNTRY VISITS AS A DRIVER TO WORK ON AMR WITHIN THE EU

These country-to-country visits have demonstrated to be an effective cooperative working method that enables the identification of highly relevant common topics to discuss at European level. These external assessments offer not only an objective evaluation, but also the possibility to exchange views and experiences and discuss about policy options with a different country that might have experienced similar challenges.



## SOME EXAMPLES OF COUNTRY-TO-COUNTRY VISITS IMPACT AT NATIONAL LEVEL



### GREECE

The visit accelerated the discussions between ministries and allowed the finalization of the One Health Greek National Action Plan. The plan was signed in 2019 by the three ministers: Health, Agriculture and Environment.





## Strengthening networks and sharing best practices between Member States



### GERMANY

The planning of their 5-year National Action Plan was based on the results of the country to country visits and the Joint External Evaluation.

The visits also facilitated that financing and support for evidence-based national treatment guidelines are now ongoing.

## STRENGTHENING SUPERVISION

EU-JAMRAI has established the basis for a network of supervisory bodies in the human health sector. The members of the network are competent authorities, professional associations or any other institutions in the Member States responsible for the control, evaluation, enforcement or supervision of AMR related activities in the human health sector. The next steps will be further discussed within the AMR One Health Network.



### RESULTS IN A NUTSHELL

- Coordination of the self-assessment EU [↗](#) of One Health strategies and National Action Plans to combat AMR in 14 EU countries.
- 13 country-to-country visits to facilitate best practices exchange between Member States.
- Interactive microsite [↗](#) that visualizes who visited who and provides an overview of best practices for different AMR topics .
- Basis for a network of supervisory bodies [↗](#) in the human health sector.



## Strengthening networks and sharing best practices between Member States

### EU-JAMRAI RECOMMENDATIONS & CALLS-TO-ACTION

#### **[“The need to develop indicators and targets for AMR action plans in the EU”](#)**

There is an urgent need to establish common EU indicators and targets to monitor the progress of the implementation of each National Action Plan. These are crucial to ensure that all Member States reach the same level of achievements.

#### **[“The need for a reinforced AMR One Health Network”](#)**

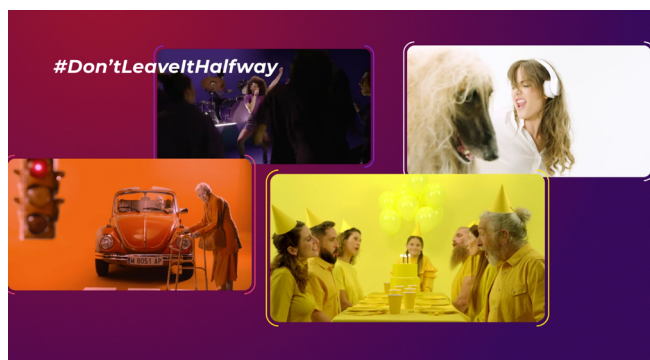
One of the main conclusions from the work described above is that there is a pressing need to enhance cooperation between Member States. An extended and strengthened AMR One Health Network is crucial to achieve this purpose and make Europe a best practice region. We will only obtain a full impact of the EU action plan against AMR addressing all the components of the One Health trans-sectoral approach.



## EU-JAMRAI RESULTS

### Raising awareness and promoting behaviour change

Increasing awareness on antimicrobial resistance promoting the responsible use of antibiotics and encouraging healthy habits was a priority for EU-JAMRAI. After delivering a Social Beha-



#### AMR WEBINAR FOR JOURNALISTS

An online training opportunity for journalists with clear and accurate scientific information from senior tutors (EU-JAMRAI, ECDC and FAO) with long experience in the fight against AMR.

#### SOCIAL MEDIA LISTENING

An analysis of the conversation regarding antimicrobial resistance to identify information gaps, trends and opportunities. Among the

#### ONE HEALTH BUTTERFLY EFFECT

A social media campaign to address the knowledge gap identified by the social media listening and raise awareness about the complex concept One Health.

- Claim: "Everybody can flap their wings to create a One Health Butterfly Effect".
- Objective: engage the audience highlighting that individual small changes can have large effects.

viour Change Communication (SBCC) strategy, the communication team started the design and implementation of several **dynamic campaigns and activities**.

#### #Don'tLeaveltHalfway

With a touch of humour, this video series highlights the importance of following the prescription given by the healthcare professional.

- 4 announcements.
- 18 languages.
- **2.7 million people** reached in one-month through social media channels.
- Watch them at [EU-JAMRAI website](https://www.eu-jamrai.eu).

- Topics: The impact of AMR in human health and animal health, the ways in which Europe is facing this global health challenge and the important role of the media.

main conclusions: the concept One Health was not being used.





### MICRO-COMBAT GAME APP

Given the complexity of introducing antibiotic resistance in the curricular programmes of schools, EU-JAMRAI developed a collaborative game app to facilitate that the subject is treated during school hours. <https://microcombat.eu>

- Based on the card game developed by ISGlobal Research Institute.
- For 10 years old players and older.
- 19 languages.
- Topics: Types of pathogens (bacteria, viruses, fungi, and protozoa), multiple routes of transmission, measures to prevent infectious diseases, the specificity of drugs to combat

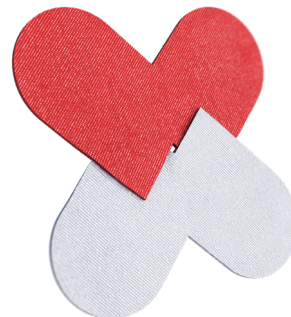
them, and the phenomenon of pathogen resistance to these drugs.

- Almost 3.000 downloads in the first 2 months.



### FIRST GLOBAL ANTIBIOTIC RESISTANCE SYMBOL

EU-JAMRAI called to action individuals from all over the world and organized a contest to find the first global Antibiotic Resistance Symbol. Something TANGIBLE, that ANYONE, ANYWHERE, could make at home and wear with pride; like the AIDS red ribbon.

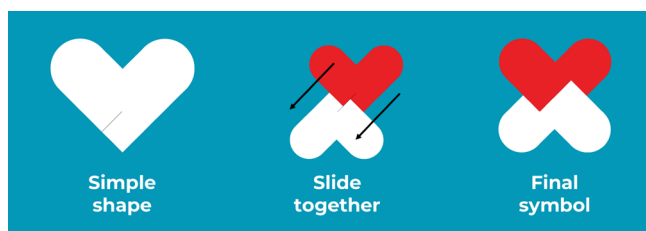


#### THE CONTEST

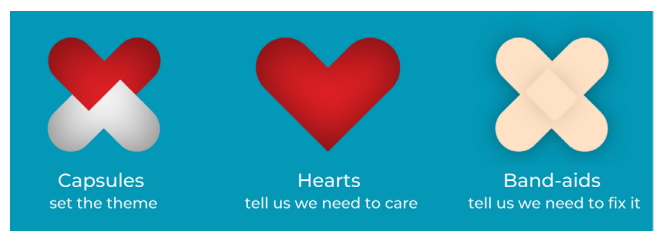
- Over 600.000 people reached in social media.
- 600 applications from 44 countries.
- A multi-sectoral jury, with members from several organisations involved in the fight against AMR.

- 1 winner: David Ljungberg, a Swedish Product Designer and Art Director with multiple awards specialized in user-focused design to bridge the communication gap between science and the general public.

#### HOW TO CRAFT IT



#### THE CONCEPT





## Raising awareness and promoting behaviour change

### THE CAMPAIGN

- ▶ Promotional materials and templates widely shared.
- ▶ **2 million people** reached in the first 2 months.
- ▶ Remarkable impact on Twitter, where many organisations and personalities supported the initiative sharing pictures wearing the symbol.
- ▶ Outstanding support from EU-JAMRAI stakeholders.
- ▶ Promotional materials available at [EU-JAMRAI website](#).

### RESULTS IN A NUTSHELL

- [Activities and campaigns](#) to raise awareness addressed to different target audiences.
- Dynamic activity in different social media channels (@EUjamrai).
- [1 SBCC strategy & Reports](#) with evaluated impact of all activities.
- [“Toolkit for awareness raising and behaviour change communication on AMR”](#) to guide countries and partners in their efforts to raise awareness on AMR collecting all the results and lessons learnt by EU-JAMRAI communication team.

## EU-JAMRAI RECOMMENDATIONS & CALLS-TO-ACTION

- ▶ Do not underestimate that promoting behaviour change is the biggest challenge in the fight against AMR and continue seeking ways to engage all sectors of society to ensure that they feel part of the solution.
- ▶ Continue supporting countries to ensure that communication is a corner stone of their National Action Plans on AMR.
- ▶ Support and popularise the use of the Antibiotic Resistance Symbol.





## EU-JAMRAI RESULTS

### Surveillance

Having strong One Health surveillance systems to monitor antimicrobial resistance is one of the pillars to tackle this global health threat.

## BUILDING EUROPEAN SURVEILLANCE IN DISEASED ANIMALS

### THE CURRENT SURVEILLANCE SYSTEM IN EUROPE

Currently, the European Union coordinates antimicrobial resistance surveillance through two of its agencies.

- Medical sector: ECDC monitors AMR in diseased individuals through the EARS-Net and FWD-Net.

- Animal and food sectors: EFSA monitors AMR from healthy food-producing animals and food thereof.

### THE GAP

The current European monitoring system does not cover AMR surveillance in sick animals. This is of limited help to veterinary practitioners and

policymakers seeking to improve antimicrobial prudent use in animal health.

### THE NEED: EARS-VET

There is an urgent need to build the European Antimicrobial Resistance Surveillance network in Veterinary medicine (EARS-Vet). By complementing and integrating the AMR monitoring systems of the ECDC and EFSA, EARS-Vet would represent a major step towards a stronger One Health strategy for AMR surveillance.





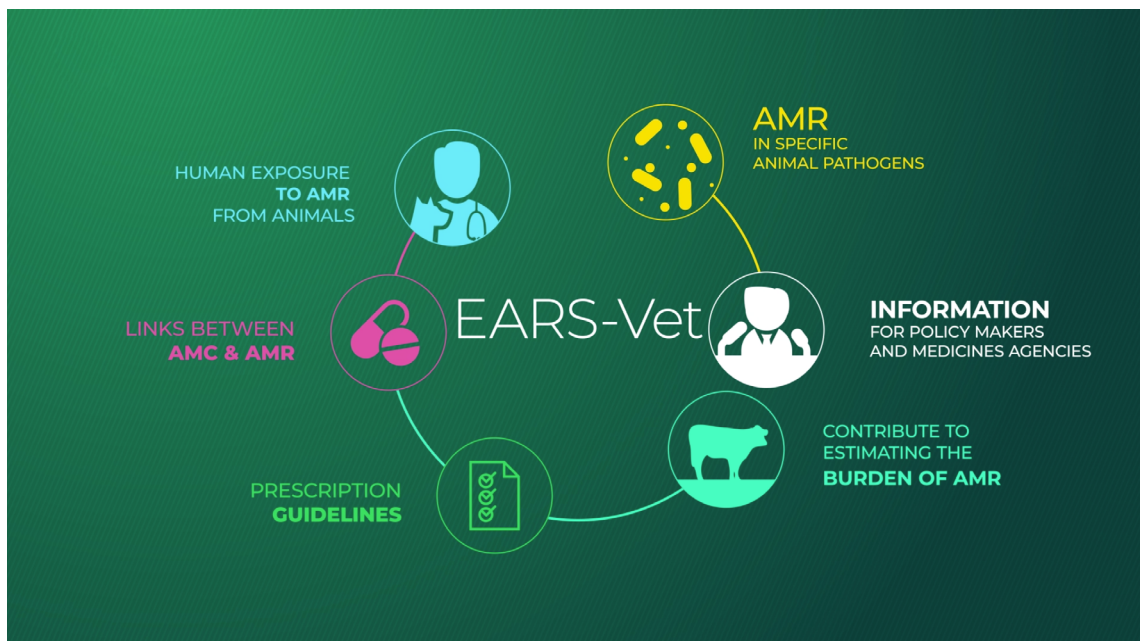
## EARS-VET FRAMEWORK

EU-JAMRAI set up a multidisciplinary group of 30 experts from 14 European countries. Together and in consultation with relevant stakehol-

ders, this group developed the EARS-Vet surveillance framework.

### OBJECTIVES

- ▶ Inform on AMR occurrence in specific animal pathogens.
- ▶ Contribute to the development of evidence-based guidelines for antimicrobial prescription in animals.
- ▶ Investigate direct links between antimicrobial consumption and AMR.
- ▶ Support risk assessment of human exposure to AMR from animals via non-food related routes.
- ▶ Provide timely information for policy makers and medicines agencies.
- ▶ Contribute to estimating the burden of AMR in the animal sector.



### DESIGN

EARS-Vet would operate as a network of national surveillance systems of AMR in diseased animals, similarly to EARS-Net in the human sector. It has been designed following a bottom-up

approach, so that it takes into account what is relevant and feasible to monitor for national surveillance systems.

### SCOPE

It was agreed to include 220 combinations of animal species, production types, specimens, bacterial species, antibiotics of interest to animal

health and human health and EARS-Vet standards for antimicrobials susceptibility testing.

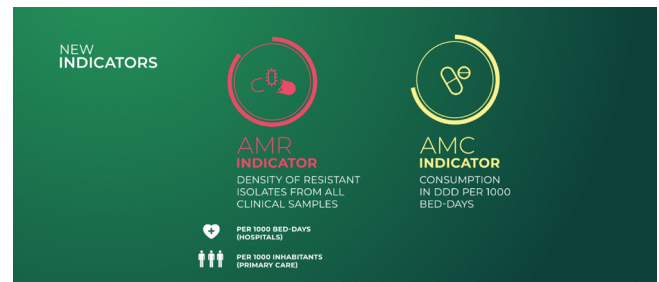


## NEAR-REAL TIME SURVEILLANCE IN HUMAN HEALTH

In human health, the antimicrobial resistance and antimicrobial consumption data from European countries is shared with ECDC and assessed on a yearly basis. In order to shorten the time gap between data collection and its assessment, EU-JAMRAI piloted a near-real time surveillance system.

### THE PILOT STUDY

- ▶ 2-and-a-half-year period.
- ▶ 17 partners from 11 countries.
- ▶ 2 new indicators.
- ▶ Quarterly collection of 41 indicators from hospitals and primary care at local, regional or national levels.



### RESULTS IN A NUTSHELL

- **Animal health:** [🔗](#) Framework of a surveillance network to monitor AMR in diseased animals: EARS-Vet.
- **Human health:** [🔗](#) Pilot of a near-real time surveillance system in 17 institutions from 11 countries.

## EU-JAMRAI RECOMMENDATIONS & CALLS-TO-ACTION

### [“European Antimicrobial Resistance Surveillance network in Veterinary medicine \(EARS-Vet\)”](#) [🔗](#)

EU-JAMRAI urges EU and national decision makers to provide financial support for EARS-Vet pilot phase, encourages Member States to join this initiative and recommends that a EU body receives the mandate to coordinate AMR surveillance in diseased animals. This would ensure the integration of EARS-Vet within the European landscape, and contribute to achieving a stronger One Health surveillance of AMR.

### [“Near-real time surveillance in human health”](#) [🔗](#)

The results of EU-JAMRAI pilot show that real time surveillance is possible. The requirements to make it a reality are more institutional support, unified coordination of microbiological and antimicrobial consumption data sources, more homogeneous indicators, dedicated human resources and modern and integrated IT systems.



## EU-JAMRAI RESULTS

### Antimicrobial stewardship



Antimicrobial stewardship is one of the core strategies to combat AMR. It is defined as **“a coherent set of actions that promote the responsible use of antimicrobials”**.

## ANTIMICROBIAL STEWARDSHIP IN HUMAN MEDICINE

EU-JAMRAI identified a lack of efficient and easily accessible tools to facilitate the implementation of antimicrobial stewardship in human

health at both country and healthcare level. To fill that gap the Joint Action developed the following activities.

### REPOSITORY WITH GUIDELINES, TOOLS AND IMPLEMENTATION METHODS FOR ANTIBIOTIC STEWARDSHIP

After setting up a survey to identify antibiotic stewardship programmes in Europe, EU-JAMRAI revised the available materials and structured them by level of care (hospital care, long-term care facilities (LTCF) and primary care). The result is a repository that has been well received and already used, among others, by the ARCH Network.

#### LISTS BY LEVEL OF CARE

- [ HOSPITAL CARE ]
- [ COMMUNITY/PRIMARY CARE ]
- [ LONG-TERM FACILITY CARE ]





## WORKSHOP WITH EXPERTS

EU-JAMRAI also organized a workshop with experts from 22 European countries who discussed the barriers and enablers of good stewardship



programmes in their own countries. The main conclusions were:

- ▶ More actions in place in hospitals than in primary care.
- ▶ Lot of recent action for family doctors.
- ▶ Experience with long-term care facilities lagging behind.

While there are success factors and problems specific to each country, this workshop confirmed that there is a lot of common ground and countries can benefit from the findings of other Member States.

## QUALITATIVE STUDY

A qualitative study was conducted in seven different European countries to assess attitudes towards antimicrobial stewardship (at national, hospital, LTCF and primary care levels) to identify the most appropriate core elements of antimicrobial stewardship programmes and the most significant enablers and barriers for successful implementation. The results are already being used to inform the content and action points of upcoming National Action Plans on AMR.



## ANTIMICROBIAL STEWARDSHIP IN VETERINARY MEDICINE

### IDENTIFICATION OF CORE COMPONENTS

The core components needed for optimal implementation of antimicrobial stewardship in animals is broader than in humans due to the variety of production systems and animal species. EU-JAMRAI developed a survey to identify these components and support Member States in the design of their own stewardship programmes.

The results of the questionnaire are already being used to propose a stewardship programme. Suitable for adaptation to different contexts and countries, it can be used in both companion and production animals.








### RESULTS IN A NUTSHELL

#### Human health

- Repository  with existing guidelines, tools and implementation methods for antibiotic stewardship in human health by level of care.
- Qualitative study to assess attitudes towards core elements of antimicrobial stewardship.

#### Animal health

- Survey to identify the core components needed for implementation of antimicrobial stewardship.
- Stewardship programme suitable for adaptation to different contexts and countries (companion and production animals).

## EU-JAMRAI RECOMMENDATIONS & CALLS-TO-ACTION

### **“The need to develop core elements at the European level on AMS and IPC”**

The EU should prioritise further efforts on antimicrobial stewardship by developing European core elements for antibiotic stewardship programmes implementable at national and facility levels in both human and animals health.

### **“Appropriate use of Antibiotics in a One Health perspective”**

EU-JAMRAI encourages Member States to publish a white book on the implementation of antimicrobial stewardship in animal health, including definition of a common structure, description of the core elements, the roles of each core professional and indicators to assess the progress.



## EU-JAMRAI RESULTS

### Infection prevention and control

Effective Infection Prevention and Control (IPC) measures are necessary to control the spread of infections, like COVID-19, as well as minimise everyday Healthcare-Associated Infections. Fewer infections in hospitals result in lower consumption of antibiotics, thereby reducing antibiotic resistance.

EU-JAMRAI has worked on piloting the implementation of guidelines and frameworks to make IPC more effective following two approaches: Top-down and Bottom-up.

## TOP-DOWN APPROACH

### IDENTIFYING GAPS

The first step was launching two surveys to identify gaps on European IPC Programmes:



1. Between policy and infection control in practice.
2. Between organizational culture and patient safety.

Some of the gaps identified were:

- ▶ Lack of active involvement of hospital administrators and clinical department heads.
- ▶ Insufficient cooperation between hospital administrators, IPC teams and public health authorities.
- ▶ Lack of human and budgetary resources.

## UNIVERSAL INFECTION CONTROL FRAMEWORK

Consequently, EU-JAMRAI piloted the implementation of the Universal Infection Control Framework (UICF) in 22 healthcare settings from 5 countries, with three objectives:

1. Raising awareness on antimicrobial resistance and Healthcare-Associated Infections and their consequences on patient safety.
2. Making Infection Prevention and Control implementation more effective by improving the already IPC implemented activities,





clarifying roles and executing activities without any additional cost or resource.

3. Training on basic infection control principles and on the use of tools to promote behavioural change such as audits, infection con-

trol gap assessments, the cost effectiveness of IPC and others.

After evaluating its implementation in these healthcare settings, the UICF was updated, published, and shared with all EU Member States.

## BOTTOM-UP APPROACH

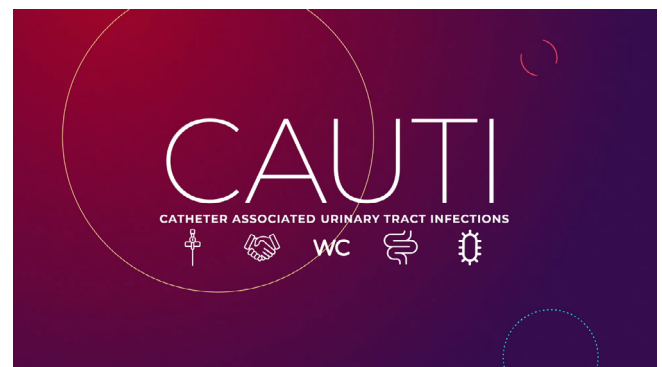
### CAUTI PREVENTION

EU-JAMRAI implemented guidelines for prevention of Catheter Associated Urinary Tract Infections (CAUTI) in 30 pilot wards (in eight EU Member States and three non-EU countries), using an evidence-based implementation model: The Breakthrough Series Model for Improvement.

Some results reported by participating wards:

- ▶ Decreased use of urinary catheters.
- ▶ Increased compliance to standard precautions.
- ▶ Procurement of closed collection systems.

- ▶ Development of national guidelines on CAUTI prevention.



### Results in some participating countries that went beyond EU-JAMRAI objectives:

- ▶ Development of a national plan to reduce HCAs.
- ▶ Development of IPC strategies.
- ▶ Implementation of guidelines for CAUTI prevention in regional/local hospitals.
- ▶ Continued use of the implementation model in other wards and hospitals.



## RESULTS IN A NUTSHELL

- **Implementation of the Universal Infection Control Framework (UICF)** [↗](#) in 22 health-care settings from 5 countries. This tool can have an impact in changing their behaviour culture regarding prevention and control of Healthcare-Associated Infections.
- **Implementation of guidelines for prevention of Catheter Associated Urinary Tract Infections** [↗](#) in 30 pilot wards of eight EU Member States and three non-EU countries in Europe. They reported achievements such as the development of a national plan to reduce HCAs and IPC strategies and implementation of guidelines for CAUTI prevention in regional/local hospitals.

## EU-JAMRAI RECOMMENDATIONS & CALLS-TO-ACTION

### **[“The urgent need to foster research on Infection Prevention and Control \(IPC\) to improve health security”](#)** [↗](#)

EU-JAMRAI has developed a list of IPC research priorities, particularly pressing in the areas of patient environment and behavioural science. Financing these prime concerns is critical and will have wide-ranging benefits, including lowering the number of hospitalised patients, hindering antibiotic resistance, and strengthening global health preparedness for the next pandemic.

### **[“The need to develop core elements at the European level on Antimicrobial Stewardship \(AMS\) and Infection Prevention and Control \(IPC\)”](#)** [↗](#)

The only steps that can be taken to control the spread of a novel virus with pandemic potential are effective IPC measures. COVID-19 crisis has also shown that we need a common framework. EU-JAMRAI urges Member States and the European Commission to develop core elements on IPC.



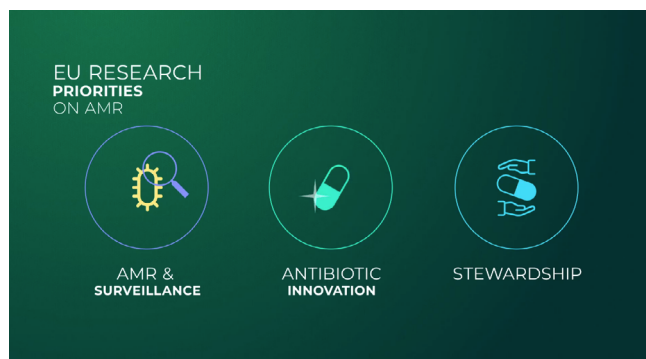
## EU-JAMRAI RESULTS

# Research and innovation to tackle AMR

## IDENTIFYING RESEARCH GAPS AND PRIORITIES

With the help of seven voluntary countries, EU-JAMRAI performed a mapping of European

research priorities and gaps on antimicrobial resistance.



### EU RESEARCH PRIORITIES

- Fundamental research on AMR and strengthening surveillance (7 out of 7).
- Assessment of best practices and strategies for antibiotic stewardship (6 out of 7).
- Development of antibiotics, alternatives to antibiotics or diagnostics (5 out of 7).

### EU RESEARCH GAPS

#### 3 critical gaps

Lack of research in:

- The environmental field.
- The food safety area.
- On how to improve clinical trials for antimicrobials.

#### 4th gap of great concern

The lack of research in the field of Infection Prevention and Control (IPC).



## THE IMPORTANCE OF INFECTION PREVENTION AND CONTROL RESEARCH

Effective infection prevention and control can have a huge impact on combating antimicrobial resistance. The less infections we have in hospitals, the lower will be consumption of antibiotics, thereby reducing antibiotic resistance. Yet, des-

pite the critical importance of IPC measures, its research needs are often neglected and many IPC guidelines are based upon weak scientific evidence.





## ENSURING THAT RESEARCH IS INFORMING POLICY MAKING

When IPC research projects compete for funding against other thematic areas, such as potential new cancer treatments, they are often perceived as dull, receiving low innovation marks.

EU-JAMRAI has developed a list of IPC research priorities covering gaps in the field. This list was built from a literature review, validated by two groups of experts, published on an international journal and widely disseminated through EU-JAMRAI network. The objective is to facilitate the appropriation of these research gaps and aware policy makers about the need to finance IPC research.

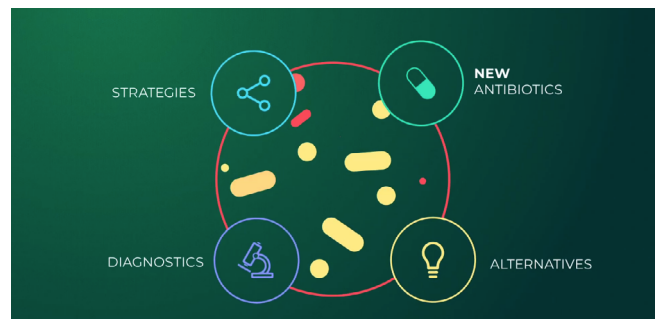


## INCENTIVISING ANTIBIOTIC ACCESS AND INNOVATION

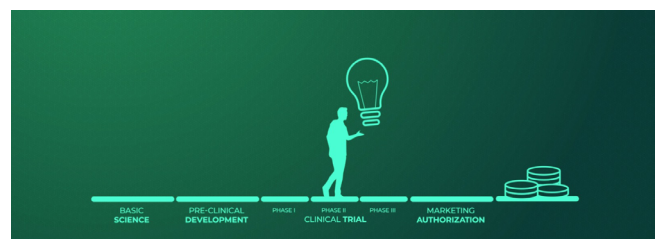
New antibiotics, alternatives, diagnostics, and strategies to combat AMR are necessary. Yet contrary to this public health need, antibiotic innovators and manufacturers are struggling. New antibiotics are unable to generate revenues large enough to sustain the interest of multinational medicines developers. Even small antibiotic innovators are failing to cover their costs and often go bankrupt.

Several prominent reports have assessed the challenges to antibiotic access and innovation and recommended “pull” incentives to increase revenues for marketed, innovative antibiotics.

To understand the barriers and facilitators for implementing this type of incentives, EU-JAMRAI performed in-depth interviews with policymakers and AMR experts in ten European countries and three more countries from other continents:



- ▶ 11 countries expressed general support for antibiotic incentives.
- ▶ Almost all are uncertain which incentive is appropriate for their country, how to implement an incentive, and how much it will cost.
- ▶ They prefer a pan-European pull incentive, rather than setting up their own national solutions.





### RESULTS IN A NUTSHELL

#### Research priorities and gaps [↗](#)

- Mapping of EU research priorities and gaps.
- List of IPC research priorities covering gaps in the field.

#### Economic incentives [↗](#)

- Evaluation of four potential financing models from a European perspective.
- In-depth interviews with 13 countries to understand their perceptions of “pull” incentives.

## EU-JAMRAI RECOMMENDATIONS & CALLS-TO-ACTION

### “The urgent need to foster research on Infection Prevention and Control (IPC) to improve health security” [↗](#)

The lack of IPC research may be due to a global lack of awareness of the most urgent IPC needs and knowledge gaps. To address this problem, EU-JAMRAI has developed a list of IPC research priorities and urges policymakers, research funders, academics, and industry to adopt them.

### “EU-JAMRAI members and co-authors call for greater medicine supply chain transparency” [↗](#)

Medicine shortages are a common problem that have been exacerbated by COVID-19. Shortages of antibiotics are particularly disruptive. Greater transparency of suppliers is needed to ensure sustainable supply.

### “Incentivising antibiotic access and innovation” [↗](#)

There is a clear need for specific, detailed incentives that national policymakers can assess, tailor, and implement to ensure national access to important antibiotics that meet public health need.

EU-JAMRAI recommends that countries pursue annual revenue guarantees, similar to the Swedish model, to secure access to both old and new essential antibiotics. Multinational agreement can form the basis of the contract terms, but the actual amount of the revenue guarantee and the contract would be between a country and a producer.



## EU-JAMRAI RESULTS

### Dissemination

After delivering a dissemination plan and building a unique visual identity, EU-JAMRAI progress and results were disseminated along the project through:

- ▶ EU-JAMRAI **website**.
- ▶ Quarterly **e-newsletters** and special issues.
- ▶ Leaflets and **brochures**.
- ▶ **Academic posters and abstracts** accepted in several health congresses.

### WEBSITE RESULTS SECTION

Organized by objectives, this section hosts in a friendly manner all the results and deliverables of EU-JAMRAI:

<https://eu-jamrai.eu/results/>

- ▶ **Peer-reviewed journals** published in recognized science journals.
- ▶ Presentations at **more than 60 AMR relevant events**.
- ▶ **Social media channels** enhanced with the production of original contents like **info-graphics and video interviews**.
- ▶ Complete dissemination report available at [EU-JAMRAI website](https://eu-jamrai.eu/).



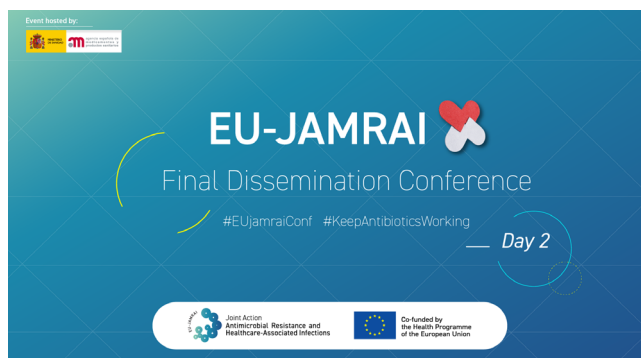
### FINAL DISSEMINATION CONFERENCE

Held on February 11 and 12, the Joint Action presented the results of three and a half years of work, as well as key recommendations to tackle AMR and reduce Healthcare-Associated Infections. The main objectives were:

- ▶ To make public the EU-JAMRAI outputs, that will enable countries to strengthen the implementation of efficient and evidence-based measures to tackle AMR, for the benefit of EU Member States and their citizens.
- ▶ To advocate for the sustainability of EU-JAMRAI results.

Celebrated online, the conference had 440 parti-


cipants the first day and 345 the second. More information about its impact and the recording of the event are available at [EU-JAMRAI website](https://eu-jamrai.eu/).





## EU-JAMRAI RESULTS VIDEOS: A NEW WAY TO COMMUNICATE THE RESULTS




EU-JAMRAI communication team prepared videos with interviews to team members and animated info-graphics with EU-JAMRAI concrete results and actions. The final outcome are seven short video pills, plus the complete one-hour video that can be watched on [EU-JAMRAI website](http://www.eu-jamrai.eu). 



## WE ARE HANDING OVER THE BEGINNING RATHER THAN THE END

**EU-JAMRAI's legacy is a new beginning in the fight against antimicrobial resistance.** We are delivering concrete measures with demonstrated potential to tackle this global health threat. We are handing over tools, thoughts, reflections and methods to take Europe forward. The next step is a renewed commitment from all Member States and relevant actors to keep AMR reduction high on the agenda.

EU-JAMRAI policy briefs collect the recommendations of the Joint Action supporting advocacy efforts to turn Europe into a best practice region in the reduction of AMR and Healthcare-Associated Infections. All briefs are available at [EU-JAMRAI website](https://www.eu-jamrai.eu). 



*“We want to see the fruits of the Joint Action growing, being transplanted and spreading out a culture of good practice, which will enable Europe to become a best practice region; and make it really safe for Europeans to go into their hospitals, fields, general practices, schools, and so on... and not be in fear of catching a highly resistant infection”.*

*Charles Price, DG SANTE*

*“Yes, AMR reduction is a considerable challenge, but feasible if all actors take concrete actions. We are accountable to the younger generations of the measures we take now. So, we cannot afford to work in silos. We cannot afford to stop our efforts. We have all to continue our collective effort at national, European and international level”.*

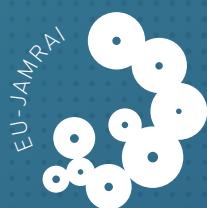
*Marie-Cécile Ploy, EU-JAMRAI coordinator*





## ACRONYM LIST

AMC	Antimicrobial Consumption
AMR	Antimicrobial Resistance
CAUTI	Catheter Associated Urinary Tract Infections
DG SANTE	The Commission's Directorate-General for Health and Food Safety
ECDC	European Centre for Disease Prevention and Control
EARS-Net	European Antimicrobial Resistance Surveillance Network
EARS-Vet	European Antimicrobial Resistance Surveillance Network in Veterinary Medicine
EFSA	European Food Safety Authority
EU-JAMRAI	European Joint Action on Antimicrobial Resistance and Healthcare-Associated Infections
FAO	Food and Agriculture Organization of the United Nations
FWD-Net	Food and Waterborne Diseases and Zoonoses Network
HCAIs	Healthcare-Associated Infections
IPC	Infection Prevention and Control
LTCF	Long-term care facility
OECD	Organisation for Economic Co-operation and Development
SBCC	Social Behaviour Change Communication
UICF	Universal Infection Control Framework
WHO	World Health Organization



## Joint Action Antimicrobial Resistance and Healthcare-Associated Infections



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