Follow-up workshop on Networks funded in the JPIAMR Network Call on Surveillance
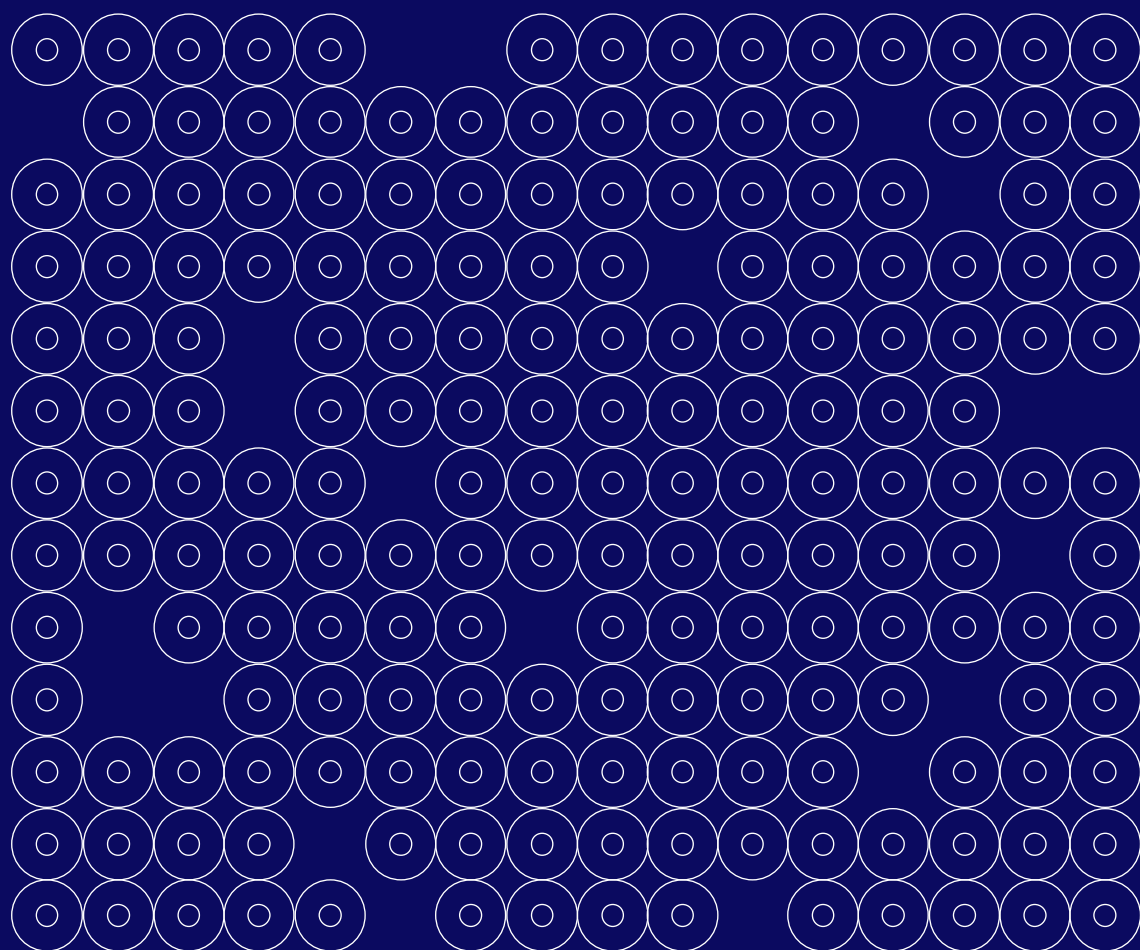
Online workshop 9 September 2020

jpiamr

Joint Programming Initiative
on Antimicrobial Resistance

Contents

Introduction

The aim of the workshop organised on September 9, 2020 was to follow-up the ten networks activities to get an overview how the networks add value to overcome barriers for AMR surveillance and the implementation of surveillance research studies as well as to be informed about the outputs generated by the networks. This workshop aimed to be a half-time report of the workshops but was delayed due to the Covid-19 pandemic. The workshop was organised by the Swedish Research Council along with the JPIAMR secretariat.

Overview of workshop

In 2018 JPIAMR launched a network call to support networks of leading experts with the aim to enhance resource alignment and maximize existing and future efforts to combat AMR by pushing forward the conceptualisation of new ideas with the field of AMR Surveillance.

Surveillance networks are essential to monitor the threat of AMR and guide public health policy. In order to understand antibiotic resistance, we must understand whether resistance genes are highly mobile and whether dominant pathogenic clones spread resistance globally. However, countries have different levels and methods of surveillance and many lack national reporting systems leading to major gaps in AMR surveillance and an urgent need to strengthen collaboration on global AMR surveillance.

In the call, suggested focal areas were presented examples but were neither mandatory nor limiting. Networks should address needs at a National and International level and encourage to include Low Middle Income Country (LMIC) aspects.

1. Impact of surveillance on prevention, intervention, clinical practice, infection control, treatment and patient management.
2. Surveillance of AMR in the healthy population: Risk factors; risk groups (e.g. migrants, travellers), reservoirs, and monitoring systems.
3. Surveillance of non-human AMR reservoirs: Strategies, models, and technologies for tracing AMR in food, animals and the environment.
4. Improvement and standardisation of methods.
5. Quality assurance, curation and sharing data.
6. Surveillance technology and tools: Optimization of methods for outbreaks, rapidly emerging clones, resource-poor settings and global coverage.
7. Social networks, big data and deep learning for AMR surveillance and prevention.

Ten funding agencies took part in the call with a total budget of approximately 1.1 million Euro:

- The Research Foundation – Flanders (FWO), Belgium
- French National Research Agency (ANR), France
- The Federal Ministry of Education and Research (BMBF), Germany
- Health Research Board (HRB), Ireland
- Italian Ministry of Health, Italy
- The Netherlands Organisation for Health Research and Development (ZonMw), The Netherlands
- The Research Council of Norway (RCN), Norway
- Instituto de Salud Carlos III, Spain
- Swedish Research Council (SRC), Sweden
- Medical Research Council (MRC), United Kingdom

Outcome

10 networks were funded with a total investment of 0.6 million euros (2 ANR, 2 BMBF, 2 MRC, 2 ZonMw, 1 HRB, 1 SRC). Out of the 10 networks, coordinators of 9 networks participated in the workshop according to the agenda in Annex A and presented their activities so far. Representatives of different funding agencies of the JPIAMR 2018 Call also participated in the workshop. The activities of the networks and their achievements till date are very impressive. Major highlights are:

- Many of the networks covered One Health aspects in surveillance studies of human and animal health, food and environmental sectors.
- Surveillance studies on AMR spread in hospitals and automated HAI surveillance systems for prevention, intervention, clinical practice, infection control, treatment and patient management were also reported.
- Network activities also included identifying standardised parameters for sample collection and data harmonisation for surveillance of antibiotic resistance across countries, including LMICs, so that data could be validated and compared from different surveillance systems.
- Establishment of new partnerships and inter-network partnerships for further work on AMR surveillance and integrated surveillance in general.
- Networks are working towards developing guidelines and method protocols for surveillance of AMR in the environment and wildlife.
- Exchange between two networks resulting in development of an International Environmental AMR Surveillance Strategy.
- Research priorities identified by a network for linking surveillance data with antimicrobial stewardship activities in four different settings: hospital, long term care facilities, community, and veterinary clinics and incorporated into a strategic research agenda document and used as joint application to EU funding
- Engagement with other relevant stakeholders, OHEJP, IMI, EFSA, ENNIRI and many other governmental health agencies to implement One Health surveillance recommendations.

Outputs generated

- The network "CoEval-AMR" published a guidance in Clinical Microbiology and Infection, 2020 to select a fit-for-purpose AMR surveillance tool.
- The network also created the decision support tool (under review now) to compare and choose existing evaluation frameworks, approaches, methods & metrics for AMU and AMR surveillance (https://guidance.fp7-risksur.eu/).
- WAWEs published a commentary on Wildlife Is Overlooked in the Epidemiology of Medically Important Antibiotic-Resistant Bacteria.
- To study AMR spread in hospitals by comparing hospital networks between countries the network NEWIS developed a R-package data reporting and analysis tool within the hospital networks.
- ICALM published a review on The importance of airway and lung microbiome in the critically ill.

- Target actions developed for linking surveillance data with AMS activities in the form of practical checklists (freely downloadable on the ARCH website https://archnet-surveillance.eu/).
- Many other articles and recommendations, White Papers, guidelines and systematic reviews are under preparation to be published.

Challenges discussed

As a final point of the agenda the coordinators of the network discussed challenges in the area of AMR surveillance as well as the network funding instrument.

- Define surveillance priorities, benchmark indicators/markers and guidelines across sectors.
- Visibility, awareness and importance of surveillance is difficult and the pandemic show how much is missing.
- IT-governance is challenging. Many networks collect data and the IT-preparedness at hospitals for example, vary a lot making data collection challenging.
- Launching pad for implementation projects are necessary
- Future long-term funding and support to sustain and implement the activities of the network
- Connection with industries is difficult. They are not aware of what interesting work is done. It was asked for to find ways to interact with the private sector.
- Activities of some of the networks have been affected due to COVID-19 related disruptions not only in terms of research activities but also for establishing close contact with network partners due to travel related restrictions. Flexibility for repurposing and utilisation of the funds (with no-cost extensions) is highlighted.

Annex I. JPIAMR Surveillance Network meeting agenda

Time: September 9, 2020 13.00 – 16.00

Venue: Virtual meeting via Zoom video conference system

Time	Session
13.00 – 13.15	**Welcome and aim of the meeting** Maria Starborg and Shawon Lahiri **Presentation of JPIAMR Networks (10 min) + Discussions (5 min)** • Provide outlook in your opinion the main value of your network to on how your Network adds value to overcome barriers for AMR surveillance and the implementation of surveillance research studies. • What would be your wish for the continuation of your network's work?
13:15 – 13:30	**Network for Enhancing Tricycle ESBL Surveillance Efficiency (NETESE)** Etienne Ruppe, France
13:30 – 13:45	**KlebNet: a One Health network bridging science and surveillance on antimicrobial resistant Klebsiella** Sylvain Brisse, France
13:45 – 14:00	**Convergence in evaluation frameworks for integrated surveillance of AMR (CoEval-AMR)** Barbara Haesler, UK
14:00 – 14:15	**Providing a Roadmap for Automated Infection Surveillance in Europe (PRAISE)** Maaike van Mourik, the Netherlands
14:15 – 14:30	**Wildlife, Agricultural soils, Water environments and antimicrobial resistance - what is known, needed and feasible for global Environmental Surveillance (WAWES)** Stefan Börjesson, Sweden

14:30 – 14:45	**Break**
14:45 – 15:00	**Intensive Care Airway and Lung Microbiome Network (ICALM)** Ignacio Martin-Loeches, Ireland
15:00 – 15:15	**National health care infrastructures, health care utilisation and patient movements between hospitals: Networks working to improve surveillance (NeWIS)** Tjibbe Donker, Germany
15:15 – 15:30	**Towards Developing an International Environmental AMR Surveillance Strategy** William Gaze, UK
15:30 – 15:45	**Bridging the gap between humAn and animal suRveillance data, antibiotic poliCy, and stewardsHip (ARCH)** Evelina Tacconelli, Germany
15:45 – 16:00	**Summary and discussion of the day** The AMR surveillance landscape, research gaps and future challenges. Maria Starborg and Shawon Lahiri

Annex II. List of participants

Network coordinators:
- Etienne Ruppe
- Sylvain Brisse
- Barbara Haesler
- Maaike van Mourik
- Stefan Börjesson
- Ignacio Martin-Loeches
- Tjibbe Donker
- William Gaze
- Evelina Tacconelli

- Funding agency representatives
- JPIAMR secretariat representatives