Food- and Waterborne Diseases
Antimicrobial Resistance – Reference Laboratory Capacity

FWD AMR RefLabCap

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Provision of EU networking and support for public health reference laboratory functions for antimicrobial resistance in *Salmonella* and *Campylobacter* in human samples

- The project is run under a contract with HaDEA on behalf of DG SANTE and in close cooperation with ECDC
- 4-year project: 2021-2024

**Contractors:**
- Statens Serum Institut (SSI)
  - Project leader: Eva Møller Nielsen, Section of Foodborne Infections
- National Food Institute, Technical University of Denmark (DTU)
  - René Hendriksen, Research group for global capacity building
OBJECTIVES

- Support countries to enhance the **validity and accuracy of surveillance data** in order to inform concerted actions against AMR at EU level and enable better detection and control of cross border threats to human health from AMR

- AMR in *Salmonella spp* and *Campylobacter spp* in human samples

- Cooperation with ECDC, DG SANTE and when relevant also EFSA and EURLs

Participants:
- Countries participating in the EU Health programme
- Candidate and potential candidate countries, other funding

- Cooperation with ECDC, DG SANTE and when relevant also EFSA and EURLs in the food safety area
- EURL-AR, -Campylobacter, -Salmonella + inter-EURL working group on NGS
OVERVIEW OF TASKS

Networking and capacity building activities provided to national public health reference laboratories to improve their functions for AMR surveillance of human *Salmonella* and *Campylobacter* infections

Modernisation of methods for diagnostics, typing and AMR by using whole genome sequencing (WGS)

Activities to support the role of NRLs for public health to work with and build capacities in the regional and local laboratories in their own countries

Two pathogens: *Salmonella* spp and *Campylobacter* spp in humans

A specific focus on countries where capacities are less well developed
Establishing a laboratory network

**Training**

**Methods**

**Capacity building**

**Networking**

Network meetings, workshops, online presentations

- exchange of experience, best practice, inspiration
- discussions on NRL requirements, protocols, feedback on activities
- complementarity with work carried out by the relevant EURLs in the food safety area

**Website:** Protocols, guidance docs, training material, links
Project website: www.fwdamr-reflabcap.eu
NRL functions and gap analysis

- Minimum and optimal requirements in PH NRL functions
  - Recommended coverage of surveillance
  - Sampling and testing frequency
  - Epi-situations for isolation & referral of isolates from primary to national level
  - Methodological and resource capacity and capability requirements at all levels

- Identify capacity/capability gaps in all countries
  - Existing information
  - Survey in network
Capacity building

- Capacity building activities for all NRLs
  - Lab training courses
  - Workshops and surveillance exercises on integrated WGS-based surveillance

- Tailored support to ‘priority countries’
  - Country visits
  - Action plans
Modernisation of methods

- Propose optimal methodologies for AMR detection, integrated into WGS-based surveillance for cluster detection
  - Existing guidance and literature, incl. bioinformatics and databases
    • Seek consensus experts/ECDC/EFSA/EUCAST
  - Set of common methods and standard protocols for national surveillance
    • Agreement in network

- Any relevant methodologies developed by EURLs shall be taken into account to ensure complementarity

- Review/amend existing EU protocol for AMR surveillance to include genetic AMR determinants
Implementation of WGS – training and EQAs

- Multi-disciplinary training workshops and webinars for PH epidemiologists and microbiologists
  - integration of WGS into national AMR surveillance and outbreak investigation

- EQAs of WGS-based resistome profiling
  - 3 rounds for all NRLs

- Inter-laboratory ring-trials of bioinformatics pipelines for prediction of AMR
Support NRLs to build capacities in local/regional labs

- Support all NRLs in mapping the regional/local labs’ capacities for detection and characterization of *Salmonella* and *Campylobacter*
  - Strengths/weaknesses and gaps/further needs for each country

- Support NRLs to carry out regional capacity building (≥16 MSs)
  - Physical and online meetings and workshops
  - Learning material
  - Ongoing individual support

- Support NRLs to establish national network of labs

- Model protocol for national surveillance of AMR in Salm/Campy

- Guidance for internal QC schemes for reference AMR testing
WWW. FWDAMR-RefLabCap.EU

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