



Update on AMR activities

ENHANCED COLLABORATION BETWEEN AGENCIES



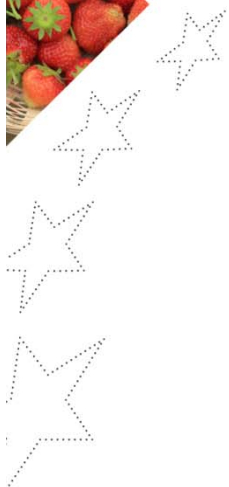
■ JIACRA Project

■ 2013 EU SR on AMR

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■ 2014 AMR data collection

■ New EC Mandate on alternatives to antimicrobials



JIACRA REPORT

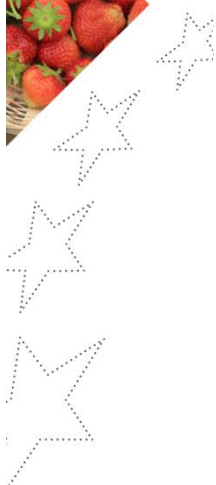


JIACRA REPORT

1. joint report on the integrated analysis of the **consumption** of antimicrobial agents and occurrence of **antimicrobial resistance** in bacteria from **humans** and food-producing **animals**

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on behalf of the JIACRA expert working group

9th EURL-AR Workshop, Kgs. Lyngby, Denmark, 24 April 2015



PREPARATORY WORK FOR 2014 EUSR ON AMR

- Training of MSs on isolate-based data reporting
 - October 2014, December 2014, March 2015
- Guidance Documents for Reporting
 - Consultation of MSs (Dec. 2014 -Jan. 2015)
 - Published in February/March 2015
- Data Models, Catalogues, IT tool updated...
 - ... in accordance with the new legislation
 - Reporting of data on *Salmonella* isolates at the serovar level
 - Mandatory reporting notably for:
 - Sampling unit type: e.g. flock
 - Sampling context: e.g. monitoring
 - Sampling origin
- MSs are encouraged to report subsets regularly in May



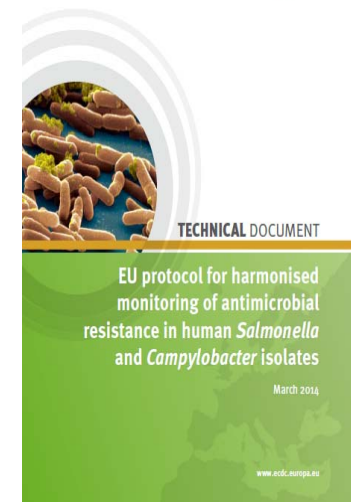
2014 EUSR ON AMR

Main objectives

- To account for new legislative provisions and new data
- To maintain follow-up of national situations, if possible
- To enhance comparison with human data
 - List of substances almost harmonised
 - Dilution ranges frame ECOFFs and CBPs
- To keep the report as concise as possible

... On-going preparation of the new 'Plan of Analysis'

- Feedback from the MSs on expected data
- New legislation
- European Commission specific requirements



2014 AMR DATA EXPECTED TO BE REPORTED

Mandatory Data

- ***Salmonella***: at least 170 isolates
 - Laying hens, broilers, turkeys → Boot swab samples (NCP *Salmonella*)
 - Carcasses of broilers, of turkeys → Neck skin samples (Reg. 2073/05 → FBO isolates possible)

- ***C. jejuni*, indicator *E. coli***: at least 170 isolates per bacteria
 - Broilers → caecum (slaughterhouse)
 - Turkeys* → caecum (slaughterhouse)

- No 'specific' ESBL/CP monitoring in 2014!

- **Reported data on ESBL/CP are planned to be analysed!**

*for MSs producing >10,000 tonnes/year.

2014 AMR DATA EXPECTED TO BE REPORTED

Scope of the 2014 EUSR on AMR

- To primarily focus on AMR data to be reported mandatorily for the year 2014 and therefore, on AMR data in bacteria from **poultry**.
- If important number of voluntary AMR data is available, it may worth analysing and including them in the 2014 report...

... on-going census of available data



DESCRIPTIVE ANALYSES

Similar Analysis Approach

- Tables on 'occurrence of resistance' (partly in Appendices)
- Temporal trend graphs
 - ECOFFS of the legislation/important substances
 - MSs will be consulted whether time series may be continued...
- Spatial distributions (most important substances)
- **MDR**
 - Full susceptibility/MDR/co-resistance to 'CIAs' (ECOFFs and **CBK**)
- **Data on ESBL/AmpC**
 - ... first discussions at the Network meeting in March
- 'main findings' further developed / narrative texts shortened
- MIC data available on the EFSA website



DESCRIPTIVE ANALYSES – *SALMONELLA* / *E. COLI*

Tables on occurrence of resistance

■ First Table Type

- Similar to 'previous year' tables
- + Ceftazidime included

■ Second Table Type

- *Newly monitored substances of public health relevance*
- Azithromycin, Tigecycline, Meropenem, Colistin
- Lot of "0" expected...
- To be reassessed

- Possible AMR indicator at the EU level (e.g. weighted mean)



DESCRIPTIVE ANALYSES – *SALMONELLA* / *E. COLI*

Construction of MIC distributions for Su and AZM

'ECOFFs'	<i>Salmonella</i>	<i>E. Coli</i>
Sulfonamides	>256 mg/L	>64 mg/L
Azithromycin	>16 mg/L	>16 mg/L

- Construction of MIC distributions

- Collaboration with EUCAST/EURL

- Request from the European Commission
- Anonymised isolate-based data





DESCRIPTIVE ANALYSES – *SALMONELLA* / *E. COLI*

Antimicrobials inserted in MDR analysis

- Ampicillin, Cefotaxime/Ceftazidime, Meropenem, Ciprofloxacin/Nalidixic acid, Tetracycline, Gentamicin, Colistin, Trimethoprim, Sulfonamides, Chloramphenicol, Tigecycline
- Azithromycin should not be included (? : no ECOFFs – only a tentative breakpoint for *Salmonella* – never used in animals – used to treat typhoid fever in man)
- Colistin not inserted in MDR analysis in the human side

APPROACHES TO REPORTING OF ESBL PHENOTYPES

Option proposed and discussed at the Network

- Aggregated data plus inferred phenotypes
 - Preferred option for overview of the occurrence of the different resistance phenotypes at the MS/EU level
 - Summary outputs are considered more valuable (e.g. #/% of AmpC- or ESBL-producers in animals)





SALMONELLA/E. COLI PRODUCERS OF ESBLs/AmpCs PER ORIGIN/MS

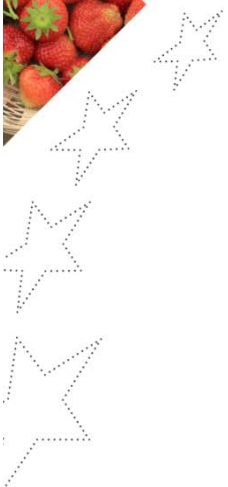
Draft table template: based on the synergy test results

MS		Resistance Detected							
		Clavulanate synergy with cefotaxime only	Clavulanate synergy with ceftazidime only	Clavulanate synergy with both ceftazidime and cefotaxime or with either compound alone	Cefoxitin microbiol. resistance, with either or both ceftazidime and cefotaxime microbiologica l resistance	Cefoxitin and cefepime microbiol. resistance, with either or both ceftazidime and cefotaxime resistance	Ertapenem resistance without imipenem or meropenem resistance	Ertapenem and imipenem or meropenem resistance without temocillin resistance (MIC >32)	Ertapenem and imipenem or meropenem resistance with temocillin resistance (MIC>32)
		Resistance Phenotype							
		ESBL - cefotaximase	ESBL - ceftazidimase	ESBL (total)	AmpC	ESBL + AmpC	ESBL or AmpC with porin loss	Carbapenemase – possible KPC	Carbapenemase – possible OXA/IMP/NDM/ VIM
MS1	170	7	1	8	15	1	1	0	0

MANDATE FOR A JOINT EFSA AND EMA SCIENTIFIC OPINION

Measures to reduce the need to use antimicrobial agents in animals husbandry

- To review the measures taken so far in the EU to reduce the use of antimicrobials in animal husbandry
 - To assess the impact of such measures regarding the occurrence of AMR in bacteria from food-producing animals and food.
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- To review the recent scientific developments in the area of possible **alternatives** to the use of antimicrobials.
 - To assess the potential impact of such alternative measures on the occurrence of AMR in bacteria from food-producing animals and food.
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- To recommend **options to reduce antimicrobial usage** in animal husbandry in the EU, including the advantages and disadvantages of the different **alternatives**.
 - Where a continued need is identified to use antimicrobials in the interests of animal health and welfare, recommend how such use can continue with the minimum possible risk to human health.



THANK YOU FOR YOUR ATTENTION !

- Acknowledgements
- 2013 EU Summary Report on AMR
- JIACAR Report

available at

- www.efsa.europa.eu

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