

Press release
Parma, 16 May 2013
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Joint EFSA and ECDC report: resistant bacteria remain an important issue that can affect humans through animals and food.

The third joint EFSA and ECDC report on antimicrobial resistance in zoonotic bacteria affecting humans, animals and foods shows the continued presence of resistance to a range of antimicrobials in *Salmonella* and *Campylobacter*, the main bacteria causing food-borne infections in the European Union (EU). Nevertheless, co-resistance (combined resistance) to two critically important antimicrobials, remains low. The report is based on data collected by EU Member States for 2011.

A high proportion of *Campylobacter* bacteria, the primary cause of foodborne diseases in the EU, found in humans, food-producing animals and food was resistant to the critically important antimicrobial ciprofloxacin whereas low resistance was recorded for erythromycin, a second critically important antimicrobial. Overall in the EU, co-resistance to critically important antimicrobials was low, which indicates that treatment options remain available so far for severe infections with these bacteria. In addition, high resistance was recorded for commonly used antimicrobials.

In *Salmonella* multidrug resistance, or resistance to at least three different antimicrobial classes, was high overall in the EU. In humans, a high proportion of *Salmonella* was found to be resistant to commonly used antimicrobials and this was also the case for animals, especially pigs and turkeys. High resistance to ciprofloxacin in isolates from poultry was also observed. Nonetheless, there were low levels of co-resistance to critically important antimicrobials among *Salmonella* from humans, food-producing animals and food.

“If we do not want to lose a number of antimicrobials which today provide an effective treatment against bacterial infections in humans, then joint efforts in the EU, including the Member States, healthcare professionals, industry, farmers and many others are needed”, said Bernhard Url, EFSA’s Director of Risk Assessment and Scientific Assistance.

ECDC Director Dr. Marc Sprenger added: “With harmonised surveillance of antimicrobial resistance in isolates from humans and animals, we can inform effective actions to prevent further spread of antimicrobial resistance in humans. To facilitate comparability of data across the EU, ECDC will continue encouraging EU Member States to use the methods and guidelines issued by the European Committee on Antimicrobial Susceptibility Testing (EUCAST). In addition, ECDC will keep coordinating the European Antibiotic Awareness Day, a European health initiative that provides a platform and support for national campaigns on the prudent use of antibiotics in humans.”

Multidrug resistance, co-resistance and resistance to commonly used antimicrobials needs to be carefully monitored. Antimicrobial resistance is a serious threat to public health as it leads to increasing health costs, extra length of stay in the hospital, treatment failures and sometimes death.

Notes to editors

- Antimicrobials, including antibiotics, are substances used to treat a wide variety of infectious diseases in humans and animals. They kill, or inhibit the growth of, microorganisms, such as bacteria, which cause infections. **Antimicrobial resistance** occurs when a microorganism becomes resistant to an antimicrobial to which it was previously sensitive. Antimicrobial resistance poses a threat to public health, as it may render treatments with antimicrobials ineffective.
- Some antimicrobials are defined by the World Health Organization as **critically important** for the treatment of serious human infections: these include ciprofloxacin and cefotaxime for salmonellosis (*Salmonella* infection), and ciprofloxacin and erythromycin for campylobacteriosis (*Campylobacter* infection). Antimicrobials used to treat various infectious diseases in food-producing animals may be the same or be similar to those used in humans. Thereby bacteria carrying resistance to critically important antimicrobials may be transferred to humans from animals.
- The joint EFSA/ECDC 2011 report is the first to analyse **multidrug resistance** and **co-resistance** to antimicrobials, in both humans and animals. Bacteria are defined as being multidrug-resistant if they are resistant to at least three different antimicrobial classes. In this report, co-resistance refers to combined resistance to two specific critically important antimicrobials.
- EFSA and ECDC have analysed the information submitted by 26 EU Member States and three EFTA countries on antimicrobial resistance in 2011. EFSA has been analysing resistance to antimicrobials in zoonotic bacteria found in animals and food since 2004. Direct comparison between antimicrobial resistance findings in humans and in food/animals presented in the report cannot be made as partly different definitions for resistance were used.
- In its 2011 action plan against the rising threats from antimicrobial resistance, the European Commission identified key priority areas, including improved monitoring of antimicrobial resistance, to which this report makes an important contribution.

More information

- [EFSA's Antimicrobial Resistance Page](#)
- [EFSA's Biological Monitoring Unit Page](#)
- [ECDC's Antimicrobial Resistance Page](#)
- [ECDC's Food- and Waterborne Diseases and Zoonoses Programme](#)
- [European Antibiotic Awareness Day](#)
- [The European Commission Action Plan Against the Rising Threats from Antimicrobial Resistance](#)
- [The European Union Summary Report on Trends and Sources of Zoonoses, Zoonotic agents and Food-borne Outbreaks in 2011.](#)

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