

Resistance to last-line antibiotics is increasingly established in Europe

Brussels, 17 November 2011

On the occasion of the fourth annual European Antibiotic Awareness Day (EAAD), ECDC is releasing new European-wide surveillance data showing that the percentage of carbapenem-resistant *Klebsiella pneumoniae* is increasing the European Union. Several Member States are now reporting that between 15 percent and almost 50 percent of *K. pneumoniae* from bloodstream infections are resistant to carbapenems. Carbapenems are the major last-line class of antibiotics to treat infections with multidrug-resistant Gram-negative bacteria such as *Klebsiella pneumoniae*, a frequent cause of pneumonia and urinary tract infections in hospitals.

On the occasion of European Antibiotic Awareness Day and the launch of a European Commission strategy to combat antibiotic resistance, ECDC Director, Marc Sprenger, said: *"The need for concerted action to curb growing resistance to antibiotics is now critical with the establishment of resistance to the last line of antibiotics being reported to ECDC from several European countries for the first time. Failure to act will mean that treatment options for patients with bloodstream infections, pneumonia, and urinary tract infections in hospitals will be severely limited. That is why ECDC is working very closely with the European Commission to support the implementation of its multi-disciplinary approach to combat antibiotic resistance".*

For a large part, antibiotic resistance is being driven by misuse of antibiotics in humans and animals. According to the latest data released by ESAC (European Surveillance of Antimicrobial Consumption), the vast majority of human consumption of antibiotics occurs in the community. Resistance to last-line antibiotics like the carbapenems, however, cannot be explained only by the use of antibiotics outside hospitals. Studies show that 50% of all antibiotic use in hospitals can be inappropriate. Prudent use of antibiotics is paramount to prevent and control resistant bacteria. Additionally, compliance with good hand hygiene by healthcare workers is the most effective way to prevent the spread of infections in hospitals. Finally, there is a particular lack of new antibiotics with new targets of mechanisms of action, in particular against carbapenem-resistant Gram-negative bacteria.

Following an increasing number of outbreaks and the spread of carbapenemase-producing Enterobacteriaceae (CPE) in healthcare facilities across Europe, ECDC recently published a [risk assessment](#) to evaluate the risk to the citizens of Europe of CPE spread through patient mobility. According to ECDC, the transfer of patients across borders poses a clear risk for the transmission of carbapenem-resistant bacteria, especially when patients are transferred from areas with high rates of such bacteria to healthcare facilities in another country or have received medical care abroad in areas with high rates of carbapenem-resistant bacteria. Another ECDC [risk assessment](#) on the spread of New Delhi metallo- β -lactamase (NDM) published today stresses that NDM and other highly antibiotic resistant bacteria represent a particular risk for Europe because EU Member States lack systematic surveillance systems and policies to detect carriage or infection deriving from these bacteria.

Marc Sprenger, ECDC Director, stressed: *"ECDC has been involved in coordinating the European Antibiotic Awareness Day, an EU-wide initiative to promote more prudent antibiotic use, since 2008, and we are very proud that 37 countries are joining efforts to mark this day in 2011."*

Antibiotic resistance is not just a problem in Europe, but is a major global public health concern. The European Antibiotic Awareness Day, the US's Get Smart About Antibiotics Week and the Canadian Antibiotic

Awareness Week are being launched simultaneously during the week of 18 November in an effort to show global solidarity in addressing antibiotic resistance through promotion of prudent antibiotic use.

Real life examples of the experiences of patients affected by resistant bacteria can be cited:

Lill-Karin, Norway: <http://www.ecdc.europa.eu/en/eaad/Pages/Patient-Stories-Story.aspx#lill-karin>

Mohammed, UK: <http://www.ecdc.europa.eu/en/eaad/Pages/Patient-Stories-Story.aspx#mohammed>

Paolo, Italy: <http://www.ecdc.europa.eu/en/eaad/Pages/Patient-Stories-Story.aspx#paolo>

About European Antibiotic Awareness Day

The European Antibiotic Awareness Day is a European health initiative which aims to provide a platform and support for national campaigns about prudent antibiotic use. Across Europe each year the European Antibiotic Awareness Day is marked by national campaigns on prudent antibiotic use during the week of 18 November. Prudent use means only using antibiotics when they are needed, with the correct dose, dosage intervals and duration of the course.

For more information, visit: <http://antibiotic.ecdc.europa.eu>

Links

Further information on surveillance of antibiotic resistance:

<http://www.ecdc.europa.eu/en/activities/surveillance/EARS-Net/Pages/index.aspx>

<http://www.ecdc.europa.eu/en/eaad/Documents/EAAD-2011-Summary-Antimicrobial-Resistance-data.pdf>

Further information on surveillance of antibiotic consumption:

<http://www.ecdc.europa.eu/en/activities/surveillance/ESAC-Net/Pages/index.aspx>

<http://www.ecdc.europa.eu/en/eaad/Documents/EAAD-2011-Summary-Antimicrobial-Consumption-data.pdf>

ECDC Risk assessment on the spread of carbapenemase-producing Enterobacteriaceae (CPE) through patient transfer between healthcare facilities, with special emphasis on cross-border transfer

http://ecdc.europa.eu/en/publications/Publications/110913_Risk_assessment_resistant_CPE.pdf

Updated ECDC risk assessment on the spread of New Delhi metallo- β -lactamase (NDM) and its variants within Europe
The report will be available at 12:00 CET, 17 November 2011 on the following page:

http://ecdc.europa.eu/en/publications/Publications/1111_TER_Risk-assessment-NDM.pdf

United States Campaign - Get Smart: Know When Antibiotics Work

<http://www.cdc.gov/GetSmart/campaign-materials/week/index.html>

Canadian Campaign – AntibioticAwareness.ca

<http://antibioticawareness.ca/>

Further information

More information on antibiotic resistance is available on our website: <http://ecdc.europa.eu>

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The European Centre for Disease Prevention and Control (ECDC) is an EU agency tasked with identifying assessing and communicating threats to human health posed by infectious diseases. It supports the work of public health authorities in the EU and EEA/EFTA Member States.