

Antimicrobial Resistance: Carbapenemases-producing bacteria in livestock

Updated communication No. 036/2016 of 23 December 2016

Carbapenems are antibiotics authorised for the treatment of humans and categorised by the World Health Organisation as critically important antimicrobials. Antibiotics of this kind should only be administered when there are strict indications, i.e. when other antibiotics are no longer effective.

The most common mechanism that leads to the resistance of bacteria to carbapenems is the formation of enzymes known as carbapenemases. Pathogens with this type of resistance can no longer be successfully treated with carbapenem-antibiotics.

The Federal Institute for Risk Assessment (BfR) first detected carbapenemases-producing enterobacteria in samples from livestock in 2011 and then again in 2015 and 2016. This resistance to carbapenems can be passed on between various bacteria. Theoretically, consumers can pick up bacteria with these resistance properties via food produced from animals or through direct contact with the animals themselves. If these people then require treatment with antibiotics, these bacteria could pose a problem as a number of antimicrobials might not work against the infection. The introduction of bacteria of this kind to hospitals could also have severe consequences. For this reason, the spread of carbapenemases-producing bacteria must be prevented wherever possible.

The full version of this BfR Opinion is available in German at:

<http://www.bfr.bund.de/cm/343/antibiotikaresistenz-carbapenemase-bildende-keime-in-nutztierbestaenden.pdf>

About the BfR

The German Federal Institute for Risk Assessment (BfR) is a scientifically independent institution within the portfolio of the Federal Ministry of Food and Agriculture (BMEL) in Germany. It advises the Federal Government and Federal Laender on questions of food, chemical and product safety. The BfR conducts its own research on topics that are closely linked to its assessment tasks.

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