The emergence and spread of antibiotic resistance, in other words the ability of bacteria to resist the action of an antibiotic, has become a recognised global problem. Antibiotic resistance severely limits the number of antibiotics available for the treatment of diseases.

Each year, 30 EU/EEA countries report data on antimicrobial resistance to the European Antimicrobial Resistance Surveillance Network (EARS-Net) and on antimicrobial consumption to the European Surveillance of Antimicrobial Consumption Networks (ESAC-Net). Both networks are hosted at ECDC.

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In hospitals, a significant decrease in consumption has been observed in countries reporting a significant increase in consumption in the community. In the community, countries have been reporting a significant increase in consumption.

New classes of antibiotics

- Sulfonamides (1930s)
- Chloramphenicol (1940s)
- Tetracyclines (1950s)
- Macrolides (1970s)
- Glycopeptides (1980s)
- Sulfonamides (1990s)
- Aminoglycosides (2000s)
- Beta-lactams (2010s)
- Lipopeptides (2010s)
- Oxazolidinones (2010s)

Antibiotic resistance

- Pseudomonas aeruginosa
- Enterococcus faecalis
- Staphylococcus aureus

Consequences for hospital patients include delayed administration of appropriate antibiotic therapy, longer length of stay, higher healthcare costs and poor patient outcomes.

Each year, about 25 000 patients die in the EU from an infection caused by drug-resistant bacteria.

Antibiotic consumption varies widely from country to country.

Antibiotics are frequently used inappropriately or when they are not needed in both humans and animals. Improving antibiotic use is the most important action needed to greatly slow the development and spread of antibiotic-resistant bacteria.

Take antibiotics responsibly!

Antibiotics CANNOT treat virus infections such as colds and flu.

Taking antibiotics may give you side-effects such as diarrhoea.

Enterococcus faecalis 32.2% Resistance

Streptococcus pneumoniae 14.6% Resistance

Staphylococcus aureus 16.8% Resistance

Meticillin-resistant Staphylococcus aureus (MRSA) 16.8% Resistance

Enterococcus faecium 32.2% Resistance

Infections due to these multidrug-resistant bacteria in the EU result in extra healthcare costs each year of at least €1 500 000 000.