European Antibiotic Awareness Day 2026
Key messages

Key facts:

- Each year, over **35 000** people in the European Union (EU) die from infections with microorganisms resistant to antimicrobials, a mortality comparable to that of influenza, tuberculosis and HIV/AIDS combined.[1]
- Each year, **4.3 million** patients in the EU/EEA acquire at least one healthcare-associated infection during their stay in a hospital.[2]
- **1 in 3 microorganisms** detected in healthcare-associated infections are bacteria resistant to important antibiotics, thus limiting options for treating infections.[3]
- In 2025, the estimated incidence of bloodstream infections of carbapenem-resistant *Klebsiella pneumoniae* (*K. pneumoniae)* for the EU/EEA increased by 72% compared to 2019. Infections with carbapenem-resistant Enterobacterales (CRE) such as *K. pneumoniae* and *Escherichia coli* (*E. coli*) pose a significant threat to patients as they are linked to high mortality.
- Several strains of multidrug resistant *K. pneumoniae* are now even resistant to several antibiotics that have been recently developed to treat CRE.
- New strains of *Klebsiella pneumoniae* combine multidrug resistance with greater ability to cause severe disease, making infections harder to treat and potentially more serious.
- Increased numbers of bloodstream infections with resistant bacteria were observed not only in AMR-pathogen combinations with an EU target, but also in many other bacteria and antimicrobial groups under surveillance.
- Over 70% of the health burden of antimicrobial resistance in the EU/EEA is due to healthcare-associated infections with multidrug-resistant bacteria, half of which could be prevented through stronger infection prevention and control measures.
- There was progress in 2025 in reducing antimicrobial consumption, but it remains insufficient towards the 2030 European Union antimicrobial consumption targets.
- Hospital consumption of antimicrobials within the WHO AWaRe Reserve group continued to increase in 2025, suggesting an increasing reliance on antimicrobials that should be reserved for the treatment of confirmed or suspected infections caused by multidrug-resistant organisms.
- 90% of total human consumption of antibiotics is in the community sector or outpatient settings. Infants and preschool-aged children are a key group most often exposed to antibiotics, though many common childhood infections do not require them.

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About the antimicrobial resistance (AMR) targets

A Council Recommendation[3] adopted on 13 June 2023, outlines five targets related to antimicrobial consumption and resistance to be reached by 2030 by the EU and individual Member States, with 2019 as the baseline year.

2030 EU target	2025 EU status against 2019 (baseline year)
Reduce the total consumption of antibiotics in humans by 20%	The EU total consumption of antibiotics was 5% lower in 2025 compared to 2019, thus indicating some progress towards the 20% target reduction for the EU by 2030.
At least 65% of the total consumption of antibiotics in humans comes from the 'Access' group of antibiotics in each country, as defined in the WHO AWaRe classification of the WHO*	The EU consumption of antibiotics from 'Access' group was 62.5% in 2025, which was 1.4 percentage points higher than in 2019. This indicates an overall positive development in the EU towards meeting the target, though progress is uneven across EU Member States.
Reduction of bloodstream infections with meticillin-resistant *Staphylococcus aureus* (MRSA) by 15%.	Estimated total EU incidence of MRSA bloodstream infections was 4.56 per 100 000 population. This was 19% lower than in 2019 and 0.23 per 100 000 population lower than the 2030 target of 4.79 per 100 000 population.
Reduction of bloodstream infections with third-generation cephalosporin-resistant *Escherichia coli* (*E. coli*) by 10%.	Estimated total EU incidence of third-generation cephalosporin-resistant *E. coli* bloodstream infections was 12.13 per 100 000 population. This was 16.4% higher than in 2019 and 2.75 per 100 000 population higher than the 2030 target of 9.38 per 100 000 population.
Reduction of bloodstream infections with carbapenem-resistant *Klebsiella pneumoniae* (*K. pneumoniae*) by 5%.	Estimated total EU incidence of carbapenem-resistant *K. pneumoniae* bloodstream infections was 3.75 per 100 000 population. This was 72% higher than in 2019 and 1.68 per 100 000 population higher than the 2030 target of 2.07 per 100 000 population. For the EU overall, this represents a worsening situation and a significant increasing trend against the 5% reduction target by 2030. ***The data contributed to prompting a fourth update of Carbapenem-resistant Enterobacterales Rapid Risk Assessment, to be published on 18 November 2026.***

**WHO AWaRe 'Access' group* *of antibiotics are mostly first-line and second-line therapies that offer the best therapeutic value, while minimising the potential for development of antibiotic resistance.*

Carbapenem-resistant Enterobacterales Rapid Risk Assessment – fourth update

- Carbapenem-resistant Enterobacterales (CRE), including carbapenem-resistant *K. pneumoniae* and carbapenem-resistant *E. coli*, pose a significant risk to patients and healthcare systems in the EU/EEA, as they are linked to high mortality.
- Isolates and small clusters of certain carbapenemase-producing *E. coli* strains are increasingly being detected, posing a risk for spread in the community.
- European genomic surveillance of CRE over the past 12 years shows the continued spread of multidrug-resistant *K. pneumoniae* high-risk lineages in hospitals. Newly emerging carbapenem-resistant Enterobacterales species (other than *K. pneumoniae*) are also spreading in hospitals.

1. 35 000 annual deaths from antimicrobial resistance in the EU/EEA
2. Point prevalence survey of healthcare-associated infections and antimicrobial use in European acute care hospitals – 2022-2023
3. Council Recommendation on stepping up EU actions to combat antimicrobial resistance in a One Health approach (2023/C 220/01)

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- Of particular concern is the expanded geographical distribution and increased number of infections with *K. pneumoniae* lineages that are now even resistant to several antibiotics that have been recently developed for treating CRE. This means that very few therapeutic options remain available for patients with severe infections caused by these bacteria.
- The threat posed by multidrug resistance in *K. pneumoniae* is amplified by the emergence and expansion of strains that combine resistance to multiple antibiotics with an increased ability to cause severe disease.
- Increased efforts are required to control and reduce harm related to the spread of CRE in Europe, including national coordination, infection prevention and control measures, antimicrobial stewardship, enhanced laboratory capacity and surveillance, and research and innovation.

Other key messages related to the latest data

- There was a substantial reduction in overall consumption of antibacterials between 2024 and 2025, and a continued increase in the percentage of Access group antimicrobials from the World Health Organization Access Watch Reserve (WHO AWaRe) classification. Despite this positive development, EU-level consumption is still not on track to achieve its targets by 2030 which means that further and continued efforts are needed to address unnecessary and inappropriate antimicrobial use at all levels of healthcare in the EU (i.e. community, hospital and long-term care sectors).
- Hospital consumption of antimicrobials within the WHO AWaRe Reserve group continued to increase in 2025, suggesting an increasing reliance on antimicrobials that should be reserved for the treatment of confirmed or suspected infections caused by multidrug-resistant organisms. This trend may partly reflect the increasing burden of carbapenem-resistant and other multidrug-resistant organisms across the EU/EEA.
- Persistent challenges in the development and availability of new treatment options for serious bacterial infections underscore the importance of antimicrobial stewardship to ensure that broad-spectrum and last-resort antimicrobials are used appropriately and preserved for patients most likely to benefit from them.
- Increases in the estimated EU incidences of bloodstream infections with resistant bacteria were observed not only for two of the above-mentioned AMR-pathogen combinations with an EU target, but also for many other bacteria and antimicrobial groups under surveillance. These increases in bloodstream infections with AMR are a cause for concern. Among the most worrying developments are:
    - increase of bloodstream infections with antimicrobial resistant (including for carbapenems) *E. coli*,
    - more than doubled estimated incidence of bloodstream infections with antimicrobial resistant *S. pneumoniae* since 2021, with increasing trends in most EU/EEA countries,
    - increasing estimated incidence of MRSA bloodstream infections, indicating that the one EU target that is currently met may be in jeopardy,
    - increase in the estimated EU/EEA incidence of vancomycin-resistant *E. faecium* bloodstream infections compared to 2024.
- Overall, AMR levels remained high in the EU/EEA in 2025, as in previous years, with wide variability among EU/EEA countries, depending on the bacterial species, antimicrobial group and geographical region.
- In general, higher AMR percentages and estimated incidences of bloodstream infections with AMR continued to be reported by countries in southern, central and eastern Europe.
- In the absence of stronger and swifter public health actions, it is unlikely that the EU AMR targets will be reached by 2030. AMR will instead continue to increasingly jeopardise public health in the EU/EEA, including preparedness efforts. This will lead to an increased number of infections with antimicrobial-resistant bacteria that will be more difficult to treat, as well as greater challenges for patient safety and a rise in AMR-related deaths.

Infection prevention and control in healthcare settings. What can be done?

- Over 70% of the health burden of antimicrobial resistance in the EU/EEA is due to healthcare-associated infections with multidrug-resistant bacteria, half of which could be prevented through adequate infection prevention and control (IPC) measures. Strengthening IPC is one of the most effective and cost-effective investments to reduce antimicrobial resistance.
- Strengthening hand hygiene and the use of alcohol-based hand rub for hand disinfection at the point of care are crucial. This can be achieved by making sure that alcohol-based hand rub dispensers are available at

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bedside, implementing regular hand hygiene monitoring and feedback systems, and using tools such as hyFive to support improvement and sustained good hand hygiene practices.

- Gloves are not a substitute for hand hygiene. Reducing unnecessary glove use can improve hand hygiene compliance, reduce transmission and save resources. Healthcare facilities should monitor glove use practices and provide regular feedback to healthcare workers. ECDC's hyFive tool supports monitoring glove use through its dedicated glove-use module.
- Ensuring sufficient specialised infection prevention and control staffing is extremely important. Healthcare facilities should ensure at least one full-time IPC professional per 250 beds, with higher staffing levels in high-risk settings.
- Ensuring a sufficient number of single rooms in each hospital is necessary so there is capacity to isolate patients with multidrug-resistant bacteria. This point should be considered when building hospitals.
- Ensuring regular cleaning and disinfection of patient care areas, including terminal cleaning after patient discharge. Cleaning practices should be routinely monitored, audited and supported through feedback.
- The spread of multidrug resistant pathogens between healthcare facilities and across regions requires a coordinated national response. Countries should establish a dedicated multidisciplinary national management team, where not already in place, to lead and coordinate prevention and control activities against key multidrug resistant pathogens.

What communities can do to prevent infections?

In the community, many infections can be prevented through hand hygiene, vaccination and other measures such as respiratory etiquette and physical distancing, potentially resulting in a decreased need for antibiotics.

Appropriate use of antibiotics

- Establishing and strengthening antimicrobial stewardship programmes in healthcare settings to ensure appropriate use of antibiotics, including restrictive use of broad-spectrum antibiotics and further reduction of prolonged antibiotic use after surgical interventions.
- 90% of total human consumption of antibiotics is in the community sector, or outpatient setting. Avoiding antibiotics when they are not needed (such as for viral infections) reduces the risk of bacteria becoming resistant to antibiotics.
- Antibiotics are not effective against infections caused by viruses such as SARS-CoV-2, common cold or influenza viruses. They should only be used to treat bacterial infections where indicated.
- Patients suffering from viral infections rarely develop bacterial infections as a complication, but if they do, they will require treatment with antibiotics. Antibiotics should be reserved for these situations and should not be taken without the advice of a medical doctor.
- Antibiotics do not work like painkillers and cannot relieve headaches, aches, pains or fevers. Taking antibiotics for the wrong reasons will not aid recovery, and may cause side-effects such as diarrhoea, nausea or skin rashes.
- If symptoms persist, or if there are concerns about a person’s health, it is important to seek medical advice.
- If a healthcare professional, usually a medical doctor, confirms that antibiotics are necessary, they should be taken responsibly - i.e. at the correct dosage and intervals, ensuring that the course is completed.

Antimicrobials use in children

- EAAD 2026 theme **Care for your kids - use antibiotics wisely** focuses on children, especially infants and preschool-aged children, as a key group most often exposed to antibiotics, though many common childhood infections do not require them.
- Most childhood colds, coughs and sore throats are caused by viruses, against which antibiotics are ineffective.
- Besides the side effects, such as diarrhoea, nausea or skin rashes antibiotics can have a negative impact on microbiome. The human body is home to billions of helpful bacteria which support health and development, but unnecessary antibiotics can disrupt this natural balance.
- Antibiotics should only be used when they are needed, as prescribed by the doctor and for the entire prescribed duration. They should be used only when the benefits outweigh the risks.

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What is antimicrobial resistance and why is it an issue?

- Antimicrobial resistance is the ability of pathogens to combat the action of one or several antimicrobials. Humans and animals themselves do not become resistant to antimicrobials, but the bacteria they carry can do so.
- Antimicrobials – mostly antibiotics – are commonly prescribed for the treatment or prevention of infections. Unnecessary use of antibiotics further contributes to the emergence of antimicrobial resistance, as bacteria can develop resistance when they are exposed to antibiotics.
- The situation with antimicrobial resistance is getting worse, and new bacterial strains are emerging that are resistant to several antibiotics at the same time (known as multidrug-resistant bacteria). A major antimicrobial resistance problem, especially in hospitals, is the emergence of bacteria that are resistant to last-line antimicrobials, which severely limits treatment options for patients with an infection. Such bacteria may eventually become resistant to all existing antimicrobials.
- Without effective antibiotics, we could return to the 'pre-antibiotic era', and it would be difficult, if not impossible, to safely perform organ transplantation, cancer chemotherapy, ensure intensive care or other medical procedures. Bacterial diseases which were once preventable would spread and it would no longer be possible to treat infections.

Information on specific pathogens

- *K. pneumoniae* is a common cause of urinary tract, respiratory tract and bloodstream infections and is a frequent cause of hospital outbreaks, if appropriate prevention and control measures are not taken.
- *E. coli* is one of the most frequent causes of bloodstream infections and community- and healthcare-associated urinary tract infections worldwide.
- *Acinetobacter* is a group of bacteria commonly found in the environment (e.g. in soil and water). The most common cause of infections in humans is *Acinetobacter baumannii*, which can cause infections in the blood, urinary tract, and lungs (pneumonia), or in wounds. *Acinetobacter* can also 'colonise' or live in a patient without causing infections or symptoms, especially in respiratory secretions (sputum) or open wounds. Very few therapeutic options remain available for patients with a multidrug-resistant *Acinetobacter baumannii* infection. Options are often limited to new, recently approved antibiotics or combinations, as well as older antibiotics such as colistin - an antibiotic from the polymyxins group.
- *Streptococcus pneumoniae* (*S. pneumoniae*) is often found in the nose and throat, and spreads through droplets produced by a person who has an infection when they cough or sneeze. *S. pneumoniae* invasive infections are those where bacteria are found in normally sterile sites or body fluids, such as the blood, and these infections cause more serious issues such as sepsis, meningitis, and osteomyelitis. These infections have the highest impact on young children and the elderly.
- *Candidozyma auris (C. auris,* formerly known as *Candida auris)* is an emerging multidrug-resistant fungus that can cause severe invasive infections, particularly bloodstream infections, in severely ill patients who are hospitalised. It is notable for its ability to persist in the hospital environment, spread easily between patients, and cause outbreaks in healthcare settings. Many *C. auris* isolates show resistance to different classes of antifungal agents, leaving very limited treatment options.

Antimicrobial resistance, a joint responsibility

- We all have a responsibility to use antimicrobials prudently - both patients and the public at large. As we are all potential users of antimicrobials at some point in our lives if we contract an infection, it is vital to retain the ability to treat these infections. Policymakers, governmental and non-governmental organisations all have a role to play in the responsible use of antimicrobials.
- Ensuring antimicrobials remain effective now and in the future is a shared responsibility for us all, as patients, parents, doctors, policymakers, nurses, pharmacists, healthcare and public health personnel, veterinarians, farmers and other individuals.

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