

INFO NOTE

EUROPEAN
COMMISSION

BEAT THE BUG
CAMPAIGN



#BeatTheBug: European Commission launches new video game to raise awareness on antimicrobial resistance

The EU has developed a free online game titled 'Beat the Bug' on the Fortnite creative platform. Its purpose is to raise young people's awareness of the enormous public health threat of antimicrobial resistance (AMR).

Beat the Bug puts players at the centre of the antimicrobial resistance mission. They take on the role of 'superheroes' who tactically engage to save the world from 'superbugs'. Participants embark on a high-tech, action-packed journey where along with containing the enemy, learn about the sensible use of antibiotics, the differences between good and bad bacteria, and why antibiotics are no match for a common cold or virus.

Antimicrobial resistance (AMR) is one of the biggest health threats of our time and a growing problem that could lead to around 10 million deaths a year by 2050. In about 10 years, nine out of 10 of hospital-acquired bacterial infections will be multi-resistant, meaning it could be more dangerous to go to a hospital than to be treated at home. In Europe alone, the estimated cost of antimicrobial resistance is €11.7 billion per year in health expenditure and lost productivity.

The way to limit the growing menace of antimicrobial resistance is through education and action. Antimicrobial resistance awareness must trickle down to the younger members of society so that understanding and good practice can start at a crucial age. It must be told in a

modern language they relate to, and in an engaging format that is entertaining as well as educational.

The underlying narrative of the game is that a united, global multi-pronged and multi-dimensional approach is the only way to beat antimicrobial resistance. Tellingly, beating antimicrobial resistance forms part of a One Health approach – the principle that human, animal and environmental health are intrinsically linked. Therefore, the fight against antimicrobial resistance must involve several stakeholders, from scientists and health professionals to vets, environmentalists and patients. In short – everyone has a role to play in tackling this health risk.

Along with the game, educational material and lesson plans have been developed for parents, teachers, health educators and community groups. These are designed for wide distribution. They aim to guide teenagers in practising basic preventative measures and promoting responsible antibiotic use by understanding the machinations of microbes, bacteria, viruses, antibiotics, resistance, and the miracles and mysteries of the human body.

What is antimicrobial resistance and why is it a threat to public health?

According to the World Health Organization, antimicrobial resistance is among the top global public health and development threats.¹

Antimicrobial resistance is the result of misuse of antimicrobial medication, both in healthcare and in food production systems. The European Centre for Disease Prevention and Control (ECDC) has estimated that over 35,000 people die annually from infections from microbes that have become resistant to the medication designed to treat them, in the European Union, Iceland, and Norway.²

Antimicrobial resistance can lead to many common infections becoming recurring and/or untreatable. By way of example, *Klebsiella pneumoniae* infections increased by almost 50% in EU countries between 2019 and 2022. *Klebsiella pneumoniae* is a common cause of urinary and respiratory tract infections. Very few options remain for patients who display multi-drug resistance to this type of bacteria.

¹ <https://www.who.int/news-room/fact-sheets/detail/antimicrobial-resistance>

² https://health.ec.europa.eu/antimicrobial-resistance/eu-action-antimicrobial-resistance_en

Is antimicrobial resistance a new problem

No, it is not. Antimicrobial resistance has been high on the EU agenda for 20 years. During this time, the Commission, under the principle of One Health, has put forward several robust initiatives in response to antimicrobial resistance for humans, animals and the environment – such as monitoring antimicrobial resistance in freshwater, wastewater and soil. While much has been done to reduce the use of antibiotics in animals in the EU, it is now time to tackle human behaviour.

With the hope of ‘what gets measured gets done’, a Council Recommendation on stepping up EU actions to combat antimicrobial resistance was adopted in June 2023.³ Its primary goals are to reduce human antibiotic consumption by 20% by 2030 and ensure that 65% of this consumption comes from the WHO Access Group, which has a lower potential for antimicrobial resistance development. Additionally, it aims to decrease bloodstream infections caused by antibiotic-resistant bacteria such as *Staphylococcus aureus*, *Escherichia coli*, and *Klebsiella pneumoniae*. The plan includes creating incentives for manufacturers to develop new antimicrobials, improving patient access to these new drugs, even those still in development, and enhancing the surveillance and monitoring of antibiotic use. Public and professional awareness programs are also part of the initiative.

It is hoped the Recommendation will accelerate progress already gained. The total incidence of bloodstream infections with methicillin-resistant *Staphylococcus aureus* (MRSA) declined by 12.2% between 2019 and 2022, which is close to the 15% reduction target at EU level.

Similarly, the incidence of bloodstream infections with third-generation cephalosporin-resistant *Escherichia coli* decreased by 16.8% during the same period.

However, the total consumption of antibiotics in humans (community and hospital sectors combined) decreased by only 2.5% between 2019 and 2022, indicating slow progress towards the 20% reduction target in the EU. On top, a rebound in 2022 suggests a high intake of antibiotics for winter colds and flu.

³ [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32023H0622\(01\)](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32023H0622(01))

Is antimicrobial resistance at the same level in each member state?

The defined daily dose (DDDs) of antibiotics per 1000 inhabitants [varies substantially between member states](#).

Looking at data between 2019 (baseline) and 2022⁴ (latest available) some countries have already reached an optimal level or are remarkably close to hitting the recommended reduction rate. Others have struggled to reduce it at all or show a higher rate in 2022 than they did in 2019.

But it must be remembered that antimicrobial resistance is a multi-faceted health threat that does not stop at borders. It cannot be tackled by individual countries alone: the key is to organise cooperation between countries, including at the global level.

Tellingly, antimicrobial resistance is not only at the centre of the EU Global Health Strategy but also a priority for the World Health Organization, WHO, Food and Agriculture Organization of the United Nations, FAO, the World Organisation for Animal Health, WOAH and the United Nations Environment Programme, UNEP.

⁴ <https://europa.eu/eurobarometer/surveys/detail/2632>

What are the call to actions in the Beat the Bug video game?

*Practice 'Prevention first' and Smart use of antibiotics.
Together we can Beat the Bug!*

Beat The Bug's messaging circles around the following narratives:

PREP UP AND USE WISELY

- Basic infection control (such as washing hands) can stop the spread of the bugs.
- Save your powerful weapons for when you need them. Antibiotics don't work against colds and flu.
- Doctor's Orders! Never self-prescribe! Always consult a doctor/healthcare professional for the right antibiotic and dosage.
- Finish the Course: If you are prescribed antibiotics, take the full course even if you start feeling better.
- No Sharing! Antibiotics are your personal 'weapons.' Don't share them. What works for you might not work for others.

WHAT TO DO FOR A COMMON COLD

- Do NOT take antibiotics. The common cold is a viral infection, so they won't work.
- Practise supportive care: Rest, hydrate, manage symptoms with use over-the-counter medications such as pain relievers and decongestants.
- Let your immune system fight it off. Your body can usually clear a viral infection within a week or two.
- Seek professional medical advice if symptoms worsen or persist beyond an expected timeframe.

FOR MORE INFORMATION

Read DG SANTE/EC's antimicrobial resistance Fact Sheet on

https://health.ec.europa.eu/home-antimicrobial-resistance-campaign_en

Press contact Stefan De Keersmaecker - Stefan.DE-KEERSMAECKER@ec.europa.eu