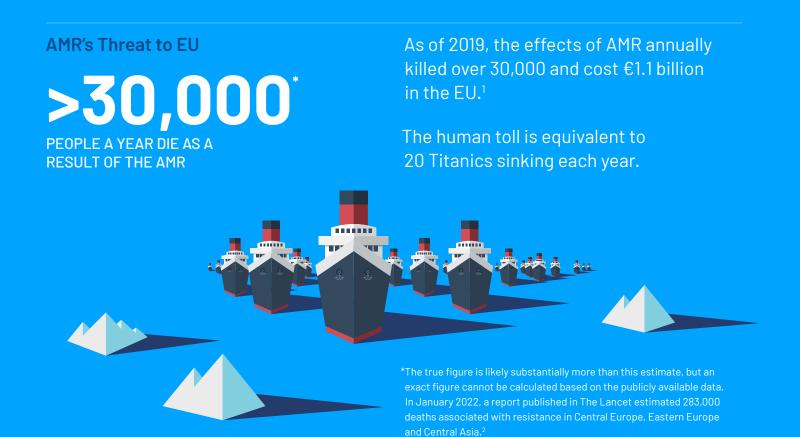


AMR: Eroding the Foundations of Health Systems Across the EU and Around the World

The impact of antimicrobial resistance (AMR) today is devastating and will only grow.

Bacteria and other microbes are becoming increasingly resistant to our existing drugs, and we lack the new drugs needed to replace them. As a result, more people are becoming sick, disabled, or even dying from drug-resistant infections.



European health systems are being strained by AMR

The current burden of bacterial drug-resistant infections in EU and EEA countries is equal to that of influenza, tuberculosis, and HIV/AIDS combined.³

Burden of AMR in EU and EEA Countries



The burden of these infections is also shouldered by the most vulnerable groups: infants and older adults over 65.4

AMR Stresses European Health Systems

AMR puts huge stresses on health systems, causing over 568 million extra hospital days (EHDs) across the EU/EEA per year.⁵ Adults over 65 account for roughly half of these EHDs.⁶









AMR drives economic instability

Between 2015 and 2050, AMR will incur a \$60 billion (PPP) cost on EU/EEA healthcare systems,⁷ a sum comparable to Greece's annual EU contributions.⁸

By 2050 the impact of AMR on GDP will be equal to that of the 2008 financial crisis... every single year.⁹

AMR Solutions: Low Cost, High ROI

Experts estimate that it would cost as little as €1.5 per capita annually to invest in a mix of solutions that would prevent almost 30,000 AMR-related deaths per year and lead to an annual savings of €1.4 billion in the EU/EEA.¹⁰





Human longevity is under threat from AMR

As resistance grows, current antibiotics will stop working. If we fail to develop and make new antibiotics available, we risk returning to an era where even routine operations like joint replacements and cesarean sections are life-threatening events due to common infections.¹¹

Left unaddressed, AMR threatens the very promise of human longevity.^{12,13}

Without effective antimicrobials, the 11 most common surgical and leukemia

chemotherapy procedures alone would result in an additional 439,000 postoperative infections and almost 310,000 post-intervention deaths in the EU.¹⁶

The Scale of AMR Challenge

In Europe, almost 1 in 5 hospital-acquired infections (HAI) is a result of resistant bacteria;¹⁴ estimates suggest that there were over 425,000 drug resistant HAIs across Europe in 2019.¹⁵

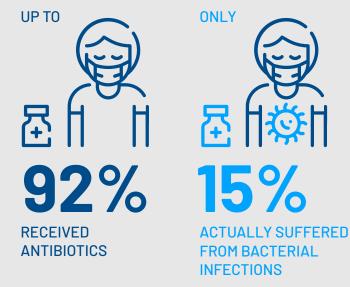


COVID-19 has disrupted attempts to slow AMR

COVID-19 has accelerated the pace of growing drug-resistance.¹⁷

Antibiotics Mismanagement

Researchers estimate that 56–92% of hospitalized COVID-19 patients received antibiotics, while only 6–15% actually suffered from a bacterial coinfection.¹⁸





Calls to Action:

Policy is the main lever for effective action on AMR. By putting in place mechanisms that can slow resistance and spur needed innovation, the EU can make measured progress against this borderless threat while facilitating needed action at the country level. This necessary progress is a continuation of commitments already made by the EU and EU member states through the WHO's Global Action Plan on AMR, the UN General Assembly's high-level meeting on AMR, and G7 level commitments.

1.	The EU must follow through on promises made in the 2020 Pharmaceutical Strategy for Europe, especially the development of pull incentives for novel antimicrobials, to ensure that we have the drugs we need to fight AMR and maintain the functionality of European health systems. ¹⁹
2.	The EU Health Emergency Response Authority (HERA) must work to facilitate R&D coor- dination and collaboration to help drive new antimicrobial development. ²⁰
3.	In line with the EU One Health Action Plan against AMR, the European Commission should develop a set of actionable best practices and policy recommendations, then assess member state implementation of these AMR initiatives. ²¹
4.	The European Commission must implement an independent oversight compliance mechanism associated with the EU Guidelines on the prudent use of antimicrobials in human health to prevent inappropriate use or develop more harmonized binding guide-lines for across the EU. ²²

Endnotes

1. "EU Action on Antimicrobial Resistance." European Commission, Oct 2021, https:// ec.europa.eu/health/antimicrobial-resistance/ eu-action-on-antimicrobial-resistance_en.

2. "Global burden of bacterial antimicrobial resistance in 2019: a systematic analysis." The Lancet, Jan. 2022. https://doi.org/10.1016/ S0140-6736(21)02724-0.

3. Cassini, Alessandro, et al. "Attributable Deaths and Disability-Adjusted Life-Years Caused by Infections with Antibiotic-Resistant Bacteria in the EU and the European Economic Area in 2015: A Population-Level Modelling Analysis." The Lancet Infectious Diseases, Jan 2019, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6300481/.

4. Cassini, Alessandro, et al. "Attributable Deaths and Disability-Adjusted Life-Years Caused by Infections with Antibiotic-Resistant Bacteria in the EU and the European Economic Area in 2015: A Population-Level Modelling Analysis." The Lancet Infectious Diseases, Jan 2019, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6300481/.

5. Ouakrim, Driss, et al. "Health and economic burden of antimicrobial resistance." OECD Health Policy Studies, Stemming the Superbug Tide, Nov 2018, https://www.oecd-ilibrary.org/ sites/9789264307599-7-en/index.html?itemId=/ content/component/9789264307599-7-en.

6. Ouakrim, Driss, et al. "Health and economic burden of antimicrobial resistance." OECD Health Policy Studies, Stemming the Superbug Tide, Nov 2018, https://www.oecd-ilibrary.org/ sites/9789264307599-7-en/index.html?itemId=/ content/component/9789264307599-7-en.

7. Ouakrim, Driss, et al. "Health and economic burden of antimicrobial resistance." OECD Health Policy Studies, Stemming the Superbug Tide, Nov 2018, https://www.oecd-ilibrary.org/ sites/9789264307599-7-en/index.html?itemId=/ content/component/9789264307599-7-en. 8. "EU Contributions by Country." Statista, Jan 2021, https://www.statista.com/statistics/316691/eu-budget-contributions-by-country/.

9. "Drug-Resistant Infections: A Threat to Our Economic Future." World Bank, May 2017, https://www.worldbank.org/en/topic/health/ publication/drug-resistant-infections-a-threatto-our-economic-future.

10. "Antimicrobial Resistance: Tackling the Burden in the European Union." OECD, 2019, https://www.oecd.org/health/health-systems/ AMR-Tackling-the-Burden-in-the-EU-OECD-ECDC-Briefing-Note-2019.pdf.

11. "AMR and HAIS - Medtech Europe, from Diagnosis to Cure." MedTech Europe, May 2021, https://www.medtecheurope.org/amr-andhais/.

12. Ouakrim, Driss, et al. "Health and economic burden of antimicrobial resistance." OECD Health Policy Studies, Stemming the Superbug Tide, Nov 2018, https://www.oecd-ilibrary.org/ sites/9789264307599-7-en/index.html?itemId=/ content/component/9789264307599-7-en.

13. "EU Action on Antimicrobial Resistance." European Commission, Oct 2021, https:// ec.europa.eu/health/antimicrobial-resistance/ eu-action-on-antimicrobial-resistance_en.

14. "Antimicrobial Resistance: Tackling the Burden in the European Union." OECD, 2019, https://www.oecd.org/health/health-systems/ AMR-Tackling-the-Burden-in-the-EU-OECD-ECDC-Briefing-Note-2019.pdf.

15. Grasselli, Giacomo, et al. "Hospital-Acquired Infections in Critically III Patients With COVID-19." CHEST Journal, Apr. 2021, https://journal.chestnet.org/article/S0012-3692(21)00679-6/fulltext. 16. Ouakrim, Driss, et al. "Health and economic burden of antimicrobial resistance." OECD Health Policy Studies, Stemming the Superbug Tide, Nov 2018, https://www.oecd-ilibrary.org/ sites/9789264307599-7-en/index.html?itemId=/ content/component/9789264307599-7-en.

17. Baccolini, Valentina, et al. "The Impact of the COVID-19 Pandemic on Healthcare-Associated Infections in Intensive Care Unit Patients: A Retrospective Cohort Study." Antimicrobial Resistance & Infection Control, BioMed Central, June 2021, https://aricjournal.biomedcentral. com/articles/10.1186/s13756-021-00959-y.

18. Avershina, Ekaterina, et al. "Fighting Antibiotic Resistance in Hospital-Acquired Infections: Current State and Emerging Technologies in Disease Prevention, Diagnostics and Therapy." Frontiers, July 2021, https://www.frontiersin.org/articles/10.3389/ fmicb.2021.707330/full.

19. "Pharmaceutical Strategy for Europe." European Commission, Nov. 2020, https://eur-lex. europa.eu/legal-content/EN/TXT/?uri=CELEX-%3A52020DC0761.

20. Philipp, Wolfgang. "Health Emergency Preparedness and Response." European Commission, Mar. 2021, https://ec.europa.eu/health/ sites/default/files/antimicrobial_resistance/ docs/ev_20210325_co01_en.pdf.

21. "EU Action on Antimicrobial Resistance." European Commission, Oct 2021, https:// ec.europa.eu/health/antimicrobial-resistance/ eu-action-on-antimicrobial-resistance_en.

22. "EU Guidelines for the Prudent Use of Antimicrobials in Human Health." European Commission, Jan. 2017, https://eur-lex. europa.eu/legal-content/EN/TXT/?uri=CELEX-%3A52017XC0701%2801%29. This paper was produced by the Global Coalition on Aging with support from Pfizer.

