

Ensuring access to medicines in the fight against antimicrobial resistance

Why pay attention to antimicrobial resistance (AMR)?

Antimicrobial agents, such as antibiotics, are essential to treat some human and animal infectious diseases. AMR occurs when microorganisms change so that they are no longer affected by antimicrobial medicines used to treat them. There are different types of antimicrobials, which work against different types of microorganisms, such as antibacterials or antibiotics against bacteria, antivirals against viruses, and antifungals against fungi. Antimicrobials are often used incorrectly. The development of resistance is accelerated by the inappropriate use of these medicines, for example, using antibiotics (which help to treat bacteria) for viral infections like flu, or as a growth promoter in agriculture.

Because of growing resistance, the world is running out of effective antibiotics to treat infectious diseases. Unless appropriate action is taken, decades of progress in health and medicine risk being undone.

In May 2015, the World Health Assembly (WHA) endorsed a global action plan on AMR and urged all WHO Member States to develop national action plans (NAPs). The WHO Regional Committee for Europe (RC73) launched the new European roadmap on AMR (2023–2030), to help accelerate the implementation of national strategies on AMR.

Why pay attention to access to medicines in relation to AMR?

The continuous supply of quality, safe, effective and affordable medicines is an essential building block of every well-functioning health system. Unfortunately, shortages of medicines, including antimicrobial agents, are common, and the frequency of shortages is increasing across the WHO European Region and at a global level. According to a 2022 survey conducted by the Pharmaceutical Group of the European Union, 76% of countries surveyed reported that medicine shortages experienced in community pharmacies worsened compared to the previous year, and shortages of antibiotics was reported by 79% of countries. The issue of medicine shortage is complex and can result from both supply and/or demand side factors.

Interruptions in the availability of antimicrobials can contribute to AMR, especially when there is a shortage of narrow-spectrum antibiotics used to target and treat a few types of bacteria. These shortages force the prescription, dispensing and use of broader-spectrum and more expensive alternatives, which can lead to the development of antibiotic-resistant bacteria that are harder to treat.

Medicine shortages and stockouts have negative effects on health systems, including increased costs, poorer patient outcomes and medication errors when other medicines are inappropriately substituted. Shortages of medicines affect all countries regardless of income level.

How can both areas benefit from each other?



By addressing the primary causes of medicines shortages, policy-makers have an opportunity to solve the immediate shortage as well as the supply and demand chain-related challenges of antimicrobials, and a plethora of indirect and downstream issues. Having continuous access to a wide range of antimicrobials is crucial for antimicrobial stewardship, allowing clinicians to use the right medicines for targeted treatment. This includes averting the human, social and economic costs related to AMR and helping to prevent the emergence and spread of AMR.

What are WHO European Region's priorities regarding AMR and medicines shortages?

In May 2016, WHO Member States adopted Resolution WHA69.25 Addressing global shortages of medicines and vaccines. The resolution highlights the problems experienced when essential medicines and vaccines are not sufficiently available in national health systems.

WHO European Region provides support, technical guidance and tools to countries in the Region to develop and implement NAPs for AMR, in line with the global action plan. A NAP can help to detect and address national shortages of antimicrobial medicines.

The WHO European Region Antimicrobial Medicines Consumption (AMC) Network has been undertaking systematic surveillance of antimicrobial medicines consumption in Member States outside of the EU/EEA since 2011.

As part of the implementation of the European roadmap on AMR, a working group on novel antimicrobials has been established within the Access to Novel Medicines Platform - a unique multistakeholder collaboration to identify and agree on actions to improve patient access to novel medicines.

WHO European Region priorities for the control of AMR include:

- **antimicrobial stewardship (AMS)**, which refers to interventions aimed at promoting the optimal and appropriate use of antimicrobial agents;
- **proof-of-principle projects**, supported by WHO European Region upon a Member State's request, which demonstrate the value of rapid and reliable microbiology diagnostic tests for guiding the appropriate treatment of patients and strengthening the surveillance of AMR;
- support to countries in setting up and strengthening **national AMR surveillance** and improving diagnostic capacity, through the Central Asian and European Surveillance of Antimicrobial Resistance (CAESAR) network; and
- support to countries in setting up and strengthening **national AMC monitoring systems** through the WHO European Region AMC Network.



- A**
Access
- First choice antibiotics.
- Offer the best therapeutic value, while minimizing the potential for resistance.
- Examples: all penicillins, 1st generation cephalosporins.
- Wa**
Watch
- These include most of the "highest-priority critically important antimicrobials" for human medicine and veterinary use and should only be used for specific, limited indications.
- More prone to cause antibiotic resistance.
- Examples: 2nd generation cephalosporins, macrolides.
- Re**
Reserve
- Antibiotics that should only be used as a last resort when all other antibiotics have failed.
- Examples: linezolid, carbapenems and intravenous antibiotics for specialized treatment at hospitals.

© WHO

In 2017, WHO proposed a new classification of antibiotics, known as the AWARe classification (i.e. Access, Watch, Reserve), to facilitate antimicrobial stewardship. Access group antibiotics can treat the majority of common infections and should be accessible at all times.

The SECURE initiative was developed to address the issue of accessibility to essential antibiotics in low- and middle-income countries (LMICs) while ensuring their appropriate use. An estimated 5.7 million deaths occur annually in low- and middle-income countries that could have been prevented with the right antibiotics. SECURE is being developed by WHO and the Global Antibiotic Research & Development Partnership (GARDP), with support from UNICEF and the Clinton Health Access Initiative (CHAI). Through SECURE, participating countries will have access to essential new antibiotics, and essential older antibiotics not widely available, to address drug-resistant infections and supply chain disruptions.

Securing access to antibiotics is necessary to achieve antimicrobial stewardship goals



© WHO/EURO

Malta launched its AMR National Action Plan in 2020 in line with the 68th World Health Assembly.

According to Peter Zarb, a hospital pharmacist focusing on antimicrobial stewardship, antibiotic availability is a major challenge in Malta because it is often not economically feasible for medicine wholesalers to obtain a national marketing authorization and for the manufacturers to make medicine batches for the small Maltese private market. Similar challenges are being faced within the public sector where older antibiotics are extremely difficult to source.

Malta historically used reliance procedures for a large proportion of its medicines based on the national marketing authorizations of the United Kingdom of Great Britain and Northern (UK). "Following BREXIT, several products, including antibiotics, had their Maltese national marketing authorization withdrawn as the UK was no longer a Member State of the European Union," explained

Peter. "With the COVID-19 pandemic, sourcing of many antibiotics became even more difficult. The most difficult antibiotics to source are the narrow-spectrum antibiotics. Lack of access to these antibiotics hinders the AMS initiatives as set by local prescribing guidelines, leaving no option to clinicians other than using alternative and broad-spectrum antibiotics." Determining alternative ways to address these shortages is a major priority within the AMR National Action Plan.

The fight against AMR requires everyone's commitment. Support us by giving this important issue the high priority it deserves, by taking the appropriate decisions to ensure continuous access to medicines!

Corrigendum: Under the section "What are WHO European Region's priorities regarding AMR and medicine shortages?" a statement on the Access to Novel Medicines Platform was added. This change was implemented in the electronic file on 15 November 2023.

Document number:
WHO/EURO:2023-8315-48087-71313

Resources and contact
<http://www.who.int/europe> ► Health topics ► Antimicrobial resistance
<http://www.who.int/europe> ► Health topics ► Medicines and health technologies

WHO Regional Office for Europe
UN City, Marmorvej 51
DK-2100 Copenhagen Ø (Denmark)
Tel.: +45 45 33 70 00
euantimicrobials@who.int

