

Stop the COVID-19 pandemic from becoming an AMR catastrophe

Why pay attention to antimicrobial resistance?

Antimicrobial resistance (AMR) occurs when microorganisms change and become resistant to antimicrobial drugs 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.

Because of antibiotic 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 Member States to develop national action plans. WHA72 (May 2019) called for accelerated implementation.

What has antibiotic use got to do with COVID-19?

Up to 15% of patients with severe COVID-19 infection need antibiotics for so called co-infections (bacterial infections they have alongside COVID-19). However, currently available evidence suggests that 75% of COVID-19 patients get antibiotics, meaning that a majority are prescribed antibiotics unnecessarily without having a diagnosis of bacterial co-infection confirmed.

This overuse of antibiotics will drive the development of resistance unless action is taken. It is vital that prescribers pay close attention to guidelines in order to avoid negative long-term consequences. Both COVID-19 and AMR pose a serious public health threat with long-term negative humanitarian and economic consequences. Failure to systematically include AMR-specific activities in the COVID-19 response undermines the global fight against AMR.

Preventing and controlling AMR and COVID-19 is a complex issue which involves many different sectors and requires a comprehensive approach and international cooperation.



How can the responses to COVID-19 and AMR benefit from each other?

Some patients with COVID-19 infection go on to develop secondary bacterial infections and/or sepsis that can be life-threatening and require treatment with antibiotics. It is crucial to the COVID-19 pandemic response that antibiotics continue to be effective against bacterial pathogens. The global response to the COVID-19 pandemic is an opportunity to strengthen activities, such as antibiotic stewardship and diagnostic measures, Infection Prevention and Control (IPC), water, sanitation and hygiene (WASH), and immunization. These and other measures help control both COVID-19 and AMR, and safeguard antibiotic effectiveness for as long as possible.

What are WHO/Europe's priorities regarding AMR and COVID-19?

The COVID-19 crisis has put health systems under pressure, increasing the danger of abandoning good practices and misusing antibiotics. This can lead to increasing resistance and shortages of antibiotics. Overprescribing and hoarding of antibiotics jeopardize the treatment of the patients who need them most. It is important to assess the impact of COVID-19 on AMR including shortages and access.

Another priority is assessing antibiotic consumption among COVID-19 patients as well as levels of compliance to clinical guidelines and stewardship concepts, both at primary health care and hospital levels. This information will guide the adjustment of country support and help in the creation of training packages, advocacy messages and risk communication tailored to specific groups. Microbiology services, such as isolating pathogens and testing for drug sensitivity, need to be promoted and made more accessible.

By supporting Tailoring Antimicrobial Resistance Programmes (TAP), WHO is also looking to behavioural science for rapid, flexible and cost-effective monitoring of public knowledge, risk perceptions, behaviours and trust. This intelligence will help countries in the WHO European Region to make their COVID-19-related response, which must include AMR considerations, relevant and actionable.

WHO has developed a guidance document intended for clinicians caring for COVID-19 patients during all phases of their disease. In addition, the focus is on:

- **Antimicrobial stewardship (ASP)**, interventions aiming to promote the optimal use of antibiotic agents. ASP also ensures that the infections experienced by a patient are identified, laboratory-confirmed and properly treated.
- **Proof-of-Principle projects**, supported by WHO/Europe upon a Member State's request, demonstrate the value of rapid and reliable tests for the appropriate treatment of patients and the surveillance of AMR.
- WHO/Europe is also supporting countries in setting up and strengthening national AMR **surveillance** and improving **diagnostic capacity**, in particular through the CAESAR (Central Asian and European surveillance of antimicrobial resistance) network.
- **Infection Prevention and Control (IPC)** programmes, supported by WHO/Europe to implement the core components of IPC programmes.

Achievements so far



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Antibiotic Stewardship

WHO/Europe has developed a massive, open, online course on Antibiotic Stewardship for a competency-based approach. It is free and accessible on OpenWHO in multiple languages (openwho.org).

Infection Prevention and Control (IPC)

In 2016, WHO published an evidence-based Guideline on Core Components of IPC Programmes at the National and Acute Health Care Facility Level to prevent health care-associated infections and manage AMR at health care facilities and at the national level.

AWaRe

The AWaRe system classifies antibiotics into three stewardship groups – Access, Watch and Reserve – to emphasize the importance of their optimal uses and potential for antimicrobial resistance. WHO recommended a country level target of at least 60% of antibiotic consumption coming from medicines in the Access Group.

Antibiotics have their place in COVID-19 treatment but overuse is unnecessary

Dr Fabio Soldani is an infectious diseases specialist at the Azienda Ospedaliera Universitaria Integrata hospital in Verona in northern Italy. Italy was the first country in Europe to be severely affected by the COVID-19 pandemic, especially the north of the country.

“At the start, the main clinical challenge was a lack of information on the best way to treat patients, especially concerning antiviral therapy,” he explained. “We changed our clinical protocols several times as new information became available, but unfortunately it was often contradictory and based on a limited number of cases. At the beginning, in my hospital we gave COVID patients antibiotics in the way that we typically would for community-acquired pneumonia. This meant we would give them broad spectrum antibiotics such as cephalosporins and azithromycin, until possible bacterial superinfections had been ruled out. As the epidemic continued and we gained more experience, we started reserving antibiotic treatment only for those patients with signs of bacterial infection. Whenever possible, we tried to shorten the length of antibiotic treatment.”

In Dr Soldani’s hospital, good practice in antimicrobial stewardship from before the pandemic helped prevent antibiotic misuse when the crisis hit. “In intensive care we generally avoid giving antibiotics to prevent bacterial infection in patients on machines that are helping them to breathe. We kept this practice also during the COVID epidemic. For detecting infections, we are using new diagnostic techniques more than ever before. With the experience that we have gained, I believe that if we found ourselves in a similar situation once again, most likely the use of antibiotics would be even more restricted.”



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The fight against AMR requires everyone’s commitment. Support us by giving AMR Programmes the priority they deserve, by taking appropriate decisions and implementing effective measures to prevent drug-resistant infections from becoming the next global public health emergency!

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Resources and contact

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

